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ABSTRACT

This report describes compensatory education (CE) programs and compares their classroom activities with those of regular instruction programs. This report is part of an extensive series of studies on CE and its long-term effects. Data were collected through interviews, structured observations, and the generation of narrative protocols based on semi-structured observation in 55 high poverty schools. Great variations were found among the different programs studied but the following general characteristics were noted: (1) Title I was the primary sponsor of compensatory services; (2) student eligibility was based on standard achievement tests and teacher judgments; (3) total amount of time students received services varied widely from school to school; (4) follow-up monitoring of students receiving compensatory services was not found in schools; (5) CE students received more reading and mathematics instruction than did other students but less regular instruction; and (6) 56% of the schools provided health services and 80% provided some compensatory nutrituon services. In general it was found that principals were well-satisfied with the effectiveness of the CE programs, students had positive attitudes toward the programs, teachers had mixed attitudes, and there was little evidence of stigmatization of program participating students. Appendixes consist of supplementary papers describing actual CE settings, lessons, and classrooms and providing examples of contrasting classroom management techniques. (CG)

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SES 18

REPORT 18:
A DESCRIPTION OF COMPENSATORY SERVICES IN HIGH-POVERTY SCHOOLS

Lee H. Poynor
Elizabeth M. Surace
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REPORT 18:

A DESCRIPTION OF COMPENSATORY SERVICES IN HIGH-POVERTY SCHOOLS

Lee H. Poynor
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of the Sustaining Effects of Compensatory
Education on Basic Skills

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2. Breglio, Vincent J.; Hinckley, Ronald H.; and Beal, Richard S. Students' Economic and Educational Status and Selection for Compensatory Education. Decima Research, Santa Ana, California, January 1978.

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A GENERAL INTRODUCTION TO THE SUSTAINING EFFECTS STUDY AND AN OVERVIEW OF THE PRESENT REPORT

DESCRIPTION OF THE STUDY

In response to questions about education policies, SDC is studying compensatory education (CE); its nature, quantity, and environment; its sustained effects; and its generality, in a large study called: The Sustaining Effects Study. This thorough study will result in a series of reports from the following substudies:

The Longitudinal Study. In the Longitudinal Study, the growth of children in reading, math, functional literacy, and attitudes toward school were assessed in the fall and spring for three consecutive years. The amount and kind of instruction in reading and math were also determined for each student. In addition, teachers and principals reported on their practices of instruction and teaching. Thus, it was possible not only to assess student growth over a three-year period, but to relate this growth to the instruction.

The schools in the study were drawn from three different groups. The REPRESENTATIVE SAMPLE of schools is a sample carefully drawn to represent all of the nation's public schools that have some of the grades one through six. A second group of schools, the COMPARISON SAMPLE, is composed of schools that have large proportions of students from poor homes but do not receive special funds to offer CE services. The third group is the NOMINATED SAMPLE, composed of schools nominated because their educational programs had promise of being effective for low-achieving students. During the first year of the study, data were collected from 328 schools and about 118,000 students.

The Cost/Effectiveness Study. Information was obtained on the resources and services to which each student was exposed during reading and math instruction. Cost estimates were generated on the basis of this information. Because the effectiveness of the instructional programs is being determined in the Longitudinal Study, it will be possible to relate the effectiveness to the cost of each program.

The Participation Study. The purpose of the Participation Study was to determine the relationships among economic status, educational need, and instructional services received. The educational achievement of the students and the services they received were obtained in the Longitudinal Study, and the refined measures of economic status were obtained in the Participation Study. Visits were made to the homes of over 15,000 randomly selected students from the schools in the first-year REPRESENTATIVE SAMPLE. During the visits, information was collected on the economic level of the home and on the parents' attitudes toward their children's school and learning experiences. Thus, the level of student achievement and services could be related to the economic level of a student's home.

The Summer Study. The Sustaining Effects Study also examined the effectiveness and cost-effectiveness of summer-school programs. Information about the summer school experiences of the students was combined with other data. The resource-cost model, developed for the regular-year, cost-effectiveness study, was adapted to the needs of the summer-school study.

Successful Practices in High-Poverty Schools. This study is intended to identify and describe instructional practices and contexts that appear to be effective in raising the reading and math achievements of educationally disadvantaged students. In-depth observational and interview data were collected from 55 schools participating in the study.

THE REPORT SERIES

The major findings of the reports already published are discussed briefly below, with reference to the specific study reports that address them.

A Description of the Samples for the Sustaining Effects Study and the Nation's Elementary Schools. In order to understand the findings of this study, it is essential to become familiar with the characteristics of the samples used and their capabilities for providing generalizations to the population of the nation's schools. Technical Report I (Hoepfner, Zagorski, and Wellisch, 1977) describes in detail the samples and how they were formed. It also presents the results of a survey of 4,750 public schools with grades in the 1-6 range by projecting the data to the nation. These projections accurately describe the nation's elementary schools in terms of characteristics of the school, the kinds of services the schools provide to students, and the characteristics of the students. The interrelationships among these characteristics are also addressed.

The different kinds of samples have been explained earlier in this review. Some results concerning the characteristics of the nation's public schools are summarized below:

- *Enrollment, Urbanism, and Achievement.* The total grade 1-6 enrollment in the 1975-76 school year was estimated at about 21 million students. There is a moderately strong relationship between school enrollment and degree of urbanism, with large cities having larger schools than rural areas, which tend to have small schools. The level of student achievement is related to the degree of urbanism in a complex way; in general, there are proportionally more schools in large cities than in rural areas that have more than half of their students achieving at least one year below grade level.

- *Compensatory-Education Funds, School Characteristics, and Achievement.* About two-thirds of the nation's elementary schools received Title I funds, and about one-fifth received no compensatory funds from any sources. There is little relationship between receipt of compensatory funds and the size of a school. However, small-city and rural schools tend to receive such funds more frequently than do large-city schools. As expected, schools with high concentrations of poor students tend to receive compensatory funds more often than do schools with low concentrations.

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Similarly, schools with higher percentages of low-achieving students are more likely to receive compensatory funds.

- *Achievement and Concentrations of Poor and Minority Students.* There is a strong association between percentage of low-achieving students and concentrations of poor and minority students.

- *School's Grade Span.* Generally, the grade span in the school has little relationship to the size of school, degree of urbanism, and concentrations of low-achieving, poor, and minority students.

- *Stability of Student Body.* Schools tend to have less stability in their student bodies as the size of the school increases, and there tends to be less stability in large cities. Similarly, stability decreases as concentrations of poor, minority, and low-achieving students increase.

- *Availability of Summer Schools.* Fifty-one percent of the nation's schools with grades 1-6 have summer-school programs available for their students. Larger schools provide summer-school programs more frequently than smaller schools do. There is practically no relation between the availability of summer school and a school's level of poverty, minority concentration, or level of achievement of the students.

A Description of Student Selection for Compensatory Services as It Relates to Economic Status and Academic Achievement. The Education Amendments of 1974 require several studies to inform Congress who does and who does not receive Title I services and how selection for such services is related to family economic status and the child's academic performance (Section 417 of the General Education Provision Act). In addition, the federal program administrators want to know the differences between the services received by economically and educationally deprived children and those by non-deprived children, and the relationships between academic achievement and the children's home environment.

These questions were addressed in Technical Reports 2 (Breglio, Hinckley, and Beal, 1978), 3 (Hinckley, Beal, and Breglio, 1978), and 4 (Hinckley, Beal, Breglio, Haertel, and Wiley, 1979). A brief summary of answers to the questions is provided below:

- About 29 percent of poor students participate in Title I compared to about 11 percent of the non-poor students (Report 2). Looking at CE in general, about 40 percent of the poor students and about 21 percent of the non-poor students participate. From these findings, we can see that proportionally more poor than non-poor students participate in the services.

- Using the grade-equivalent metric (one year below expectation for the student's current grade) as the definition for educational disadvantage, about 31 percent of the low-achieving students participate in Title I, while only 10 percent of the regular-achieving students do (Report 2). For CE in general, the percentages are 46 for low achievers and 19 for regular achievers. Among the regular achievers who participate in CE, many score below the national median on achievement tests.

- Participation rates for Title I and for CE in general are highest for students who are both economically and educationally disadvantaged (Report 2). Forty-one percent of these students participate in Title I, and 54 percent participate in CE in general. Participation rates are next highest for students who are educationally but not economically needy (26 and 41 percent, respectively), and next highest for students economically but not educationally needy (20 and 28 percent, respectively). Only 7 percent of the students who are neither educationally nor economically needy participate in Title I (15 percent for CE in general). These participation rates were interpreted as indicating that the then-current allocation procedures were being complied with, and the intentions of the law were being met fairly.

- In comparison to non-poor students, poor students receive more hours of instruction per year with *special* teachers, more hours of instruction in medium- and small-sized groups, fewer hours of independent study, and more non-academic services such as guidance, counseling, health and nutrition (Report 3). The differences are even stronger when poor Title I students are compared to others. Therefore, we can conclude that the distribution of educational services is in line with the intent of the laws and regulations.

- Two aspects of the children's home environments bore significant and consistent relations to achievement: amount of reading done at home and educational attainment of the head of household. Other variables, such as family size, TV-watching behavior, and type of living quarters, were not consistently related to student achievement (Report 4). Although most parents (67 %) know whether their children's schools have special programs for low-achieving students, few (40 %) know of Title I and even fewer know of or participate in local governance of the Title I program. Poor parents, in general, are less involved in their children's educational programs, have lower expectations of their children's attainments, and give lower ratings to the quality of their children's education, but perceive Title I and other CE programs as being helpful.

Description of the Nature of CE Programs, Characteristics of Participating Students, Schools and Educational Services. The Participation Study deals almost exclusively with what has been called "selection for CE or Title I services," without examining too closely what such programs really are and how they differ from the programs regularly offered by the schools. Before we could draw any relationship between participation in a CE program and the educational progress of students, we had to be assured that there really was a program that was distinct, could be specified in some way, and had a reasonable chance of making an impact. As will be seen, not only did we analyze data on the basis of program participation, but we also considered the actual services received in order to address directly the possible differences between their intention and actuality.

Based on the analyses of data obtained from about 81,500 students in the Representative Sample of schools, Technical Report 5 (Wang, Hoepfner, Zagorski, Hemenway, Brown, and Bear, 1978) provides the following important conclusions:

- Students participating in CE are lower achievers (mean score at the 32nd percentile) than non-participants (53rd percentile). Seventy percent of the participants were judged by their teachers as needing CE, while only 19 percent of those not participating were so judged. More minority students participate in CE, proportionately, than white students, but participation in CE has little relationship with student attitudes to school, early school experience, summer experiences, or the involvement of their parents in their educational programs.

- Minority, poor, and low-achieving students tend to receive more hours of instruction in smaller groups and by special teachers, and receive more non-academic services, but their attendance rates are generally lower too, so they do not take maximum advantage of the special services provided.

- The useful predictors of whether or not a student is selected to receive CE are his/her teacher's judgment of need and participation in CE in the previous year. When these variables are considered, achievement scores, non-English language spoken in the home, and economic status contribute little more to the prediction.

- About two-thirds of the students participating in CE in 1975-76 participated in the 1976-77 school year also.

- CE students in general and Title I students in particular receive more total hours of instruction per year than non-CE students. The CE students also receive more hours of instruction from special teachers. Among CE students, Title I students receive the greatest number of hours of instruction, more frequently with special teachers, and in small instructional groups. There are no significant and consistent differences between CE students and non-CE students with regard to their teacher's instructional subgrouping practices, use of lesson plans, extent of individualization of instruction, frequency of feedback, or assignment of homework.

- Students receive between 5 to 9 hours of reading instruction per week, decreasing steadily with higher grades, and between 5 and 6 hours of math instruction per week, fairly constant over all grades.

- CE services are delivered during regular instructional hours with different kinds of activities for the participants (so that, in effect,,they "miss" some regular instruction received by their non-participating peers).

- Title I schools have higher average per-participant CE expenditures in reading and math than do schools with other CE programs. The average Title I per-participant expenditure is about 35 percent of the average per-pupil regular (base) expenditure.

- Schools receiving CE generally have higher concentrations of poor students and low-achieving students, and students with less educated parents. These schools have greater administrative and instructional control by their districts and have higher staff-to-student ratios.

- Schools that select higher percentages of regular-achieving students for CE services have larger percentages of minority and poor students, probably reflecting their tendency for saturation of CE programs.

- Most districts use counts of students receiving reduced-price lunches and counts of Aid to Families with Dependent Children to determine school eligibility for compensatory funds, while most schools select students on the basis of standardized achievement tests, frequently augmented by teacher judgments. Similar selection criteria are employed by non-public schools.

Cost-Effectiveness of Compensatory Education. In its deliberations for the reauthorization of Title I and in annual appropriation hearings, members of Congress also wanted information on the effectiveness of the Title I program relative to its cost. While it appears eminently sensible to ask the question of cost-effectiveness, it is difficult to provide the answers in a manner that will be interpreted correctly.

In the study of cost-effectiveness of CE, efforts were made to preclude enigmatic conclusions and, at the same time, to make cost estimates on a sounder basis than in the past. In Technical Report 6, Haggart, Klibanoff, Sumner, and Williams (1978) develop and present a resource-cost model that translates educational resources for each student into estimates of average or standard dollar cost for his/her instructional program. The overall strategy for estimating cost is to provide an index that represents the labor-intensity of services without being confounded with regional price differentials, different accounting methods, etc.

Using the resource-costs, CE students in general, and Title I students in particular, were found to be offered substantially higher levels of educational resources, and hence more costly programs. Participation in CE differentiates the resource-costs for services offered much more than do poverty, achievement level, race, or any other characterstics.

In Technical Report 7, Sumner, Klibanoff, and Haggart (1979) related resource-costs to achievement to arrive at an index of cost-effectiveness. Because of the low-achievement levels of children participating in CE and their relatively slow rates of achievement growth, the increased cost associated with CE appeared to be misspent (in the same way that money for severely ill and terminal patients appears to be not as effectively spent as it is for mildly ill patients). It is important to point out, however, that the appearance may not tell the true story. Because we cannot obtain truly appropriate comparison groups, we do not know what would have happened to the achievement growth of the CE students if they had not participated. Based on the comparison groups we could form, however, CE programs did not appear to have an advantage over regular programs in terms of cost-effectiveness.

The Effectiveness of Summer-School Programs. The study has also examined the results of attendance at summer school, because members of Congress and program administrators want to know if such attendance helps prevent the presumed progressive academic-deficit of low-achieving students. If attendance at summer school has positive academic effects precluding attendees' "falling back" to their achievement levels of previous years, then summer programs can be considered a means of sustaining school-year growth.

Technical Report 8 (Klibanoff and Haggart, 1980) shows that attendance at summer school has little or no effect on the academic growth of students who attend, especially low-achieving students. Because findings are based on the study of summer schools as they presently exist (and the evidence is strong that they do not offer intensive academic experiences), the non-positive findings should not be interpreted as an indictment of summer school, as such, but an evaluation of the way they are presently organized and funded. Nevertheless, when instructional services delivered in summer schools were investigated, none seemed particularly effective in improving students' achievement growth.

In the same report, the authors also addressed the hypothesis of "summer drop-off," a hypothesis advanced to explain the presumed widening achievement gap between regular and CE students. Essentially, this hypothesis states that CE students lose much more of their previous year's learning during the summer recess than do regular students. Data collected in the study fail to support the summer drop-off hypothesis: CE students do not suffer an absolute "drop-off" (although their achievement growth over the summer is less than that for regular students, as in the school year). In any event, attendance at summer school does not have much of an effect.

Technical Report 9 is a resource book. It identifies all the variables and composites that have been selected or devised for use in the Sustaining Effects Study. All measures and scales are described and rationalized. In addition, Report 9A serves as a companion volume that contains copies of all the data-collection instruments in the study except for a few that are under copyright.

The Effectiveness of Compensatory Education and the Effects of Instructional Services on Achievement Growth. Technical Report 10 (Wang, Bear, Conklin, and Hoepfner, 1981) addresses the effects of compensatory services on student development. It also examines the instructional services and major dimensions of the educational process to describe the characteristics of programs that are effective in raising achievement. The analyses were based on the first-year data of the study. The central findings were that compensatory services have small but positive impacts on achievement—primarily at the primary grades for reading, but in all the elementary grades for math. Looking specifically at educational services and processes, the major findings are:

- Regular instruction and tutor/independent work have small positive effects on achievement growth, while special instruction (small groups, special teachers, aides) do not.

- Achievement growth seems to benefit from use of more experienced teachers, more frequent feedback on academic progress, and more time teachers devote to preparation. It is hampered by classroom disturbances and by high concentrations of low achievers in the school.

No striking evidence for the effectiveness of increased instructional services was found, nor were services found differentially effective for low and high achievers. Nonetheless, within the generally positive picture for CE, compensatory services are more effective in improving achievement at the primary grades than at the later elementary grades.

Effects of Discontinuation of Compensatory Services. According to the findings in Technical Report 11 (Kenoyer, Cooper, Saxton, and Hoepfner, 1981), each year about one-third of the CE participants have their CE services discontinued, mostly because of relatively high achievement. Although these students subsequently receive reduced instructional services, their educational growth does not revert to previous low levels or to the levels of current, comparable partiicipants. No particular instructional services could be identified that account for this continued growth. The tragedy of the disadvantaged young student who becomes deprived of the presumed benefits of CE is a disturbing vision not confirmed in our study of large groups.

About 60 percent of the students discontinued from CE programs were no longer qualified because of improved achievement: 25 percent because their schools lost some form of CE funding and 15 percent because of promotions to grades in which there were no CE programs. Some specific comparisons among these groups of students showed:

- The achievement level of the second two groups (above) was substantially lower than that of the first group, and lower by far than that for regular students.

- Continuing CE participants receive more, and more costly services than discontinued or regular students.

- Regular students show greater achievement growth than CE participants, who in turn show greater growth than any of the discontinued (former) CE participants.
- Students no longer in CE show greater achievement growth during the first year out of CE than they did in the previous year, when they participated in CE.

CE Participation and the Achievement Gap. In Technical Report 12 (Zagorski, Conklin, Cooper, Hoepfner, and Wang 1982), the achievement growth of CE participants and of non-participants is followed for three years. Findings indicate that participation in Title I leads to small but positive gains in achievement that are greater than we would expect in the absence of Title I. Although the gains due to Title I are not enough to lead us to expect elimination of the achievement gap within a reasonable number of years, they are enough to slow down its widening and in some cases to reduce it.

To link achievement to Title I participation, students were studied year by year. The critical findings are:

- Title I reading participants who improve and are then discontinued from the program do not fall back afterwards, but there is a noticeable fall-back for math participants.
- New participants in Title I usually show a recent history of achievement decline—and only a very modest reversal of that decline upon participation.
- "Chronic" three-year participants show little improvement and continue at low achievement levels.
- The gains made by Title I participants cannot be accounted for by the amounts or types of educational services they receive.

Special Studies of Allocations, Achievement, and Attrition. A number of substudies are presented in Report 13 (Hoepfner, Ed., 1981) that apply selected data to specific policy issues or investigate in depth certain aspects of the complex data collected for the study. In response to the needs of Congress to have estimates of the number of schools and students that would participate in Title I under various changes in allocation procedures, national projections were made incorporating such characteristics as poverty, region, and urbanism. Several substudies concentrate on how the poverty of a school or district is or can be gauged. The report also provides information on where and to whom Title I services were then (1976-77) being distributed.

Attending more closely to achievement as a basis for the distribution of Title I services, studies are reported on the nature of "targeting" of services to students and how teachers reach judgments of their students' needs for Title I. Chapters also document the methods for selecting and developing the measures of reading and math achievement, functional literacy, and attitudes to school that are used throughout the study. The problems and advantages of out-of-level testing with low achievers are also discussed, along with illustrative data from the study.

The samples for the longitudinal studies are described in terms of the changes that occurred from the original first-year sample. Analyses of the attrition of individual students are also presented, and some conjectures about expectable influences of the observed attrition on various analyses and findings are provided.

Studies Still To Be Done. The reports yet to come from the study will address the general effects of educational practices on raising students' achievement levels, with special attention paid to the practices found in CE programs in general and in Title I programs in particular. Impact analyses will be based on three-year longitudinal data. The extensive achievement-data collected from overlapping cohorts of students in the three years will be used to describe the patterns of educational growth over the years for various groups of CE participants and non-participants. Analyses of the three-year longitudinal data will allow us to examine in greater detail the sustained effects of compensatory-education programs.

OVERVIEW

This is the eighteenth report in a series from the Study of the Sustaining Effects of Compensatory Education on Basic Skills (SES). The report describes a part of the work from a substudy known as the study of Successful Practices in High-Poverty Schools (SPHPS). The major objective of SPHPS, the subject of Report 16, was to identify and describe the instructional practices (e.g., classroom-management techniques, classroom-instructional techniques, resources, and administrative practices) that are effective in improving the reading and math skills of educationally disadvantaged students. A second major goal, the subject of this report, was to describe the compensatory-education (CE) programs operating in the schools, and to compare their classroom activities and practices with those used in regular instruction.

The compensatory programs we studied varied widely on such characteristics as the amount of time devoted to compensatory instruction and how it is scheduled, and the kinds of staff, materials, techniques, and emphases used to serve the students. "Compensatory education" is a diverse phenomenon in practice if not in intent, but we believe it generally conforms to its original intention of providing additional educational services to low-achieving children.

Because educationally disadvantaged students were of primary concern, and because educational disadvantagement is closely linked to economic deprivation, attention in SPHPS was directed to high-poverty schools. In-depth techniques of data collection, including interviews, structured observations, and the generation of narrative protocols based on semi-structured observations, were employed in 55 high-poverty schools participating in the SES. Discussions of the sample, instruments, and data-collection procedures are presented in Chapter 1. Examples of the narrative protocols are presented in the appendices. The remainder of this overview identifies the major areas investigated in our in-depth look at compensatory practices and presents the key findings from those investigations.

THE CHARACTERISTICS OF COMPENSATORY PROGRAMS

A major theme developed in Chapters 2 and 3 is that of the diversity of compensatory programs. Although in our language, and sometimes in our research and evaluation studies, we treat compensatory programs or services as if all implementations are similar, in reality they exhibit great variability. We found and highlight wide differences among programs on virtually all of the dimensions we explored, as well as differences among schools in how they configured their overall compensatory efforts. Some of the trends and conditions we found are:

- Title I, as expected, was the primary sponsor of the compensatory services.
- Determination of student eligibility was almost universally reported to be based on scores from standardized achievement tests, while teacher judgments were the most widely-used mechanism for selecting students to receive services.
- While the majority of programs were found to schedule daily services for students on a yearly basis, there were notable exceptions, and the total amount of time students were scheduled to receive instructional services varied widely from school to school and even within schools and programs.

- Special follow-up monitoring for students whose compensatory services had been terminated was not found in any of the SPHPS schools. We believe this to be a common phenomenon, and potentially a critical impediment to sustained educational effects of CE programs.

- The subjects most often studied by regular students while their CE peers received CE instruction were regular reading and math. Although the CE participants receive an overall higher amount of reading and math instruction, it is at the expense of parts of regular instruction. The problems in honoring both the letter and intent of "supplement, not supplant" rules are illustrated.

- Some 56 percent of the SPHPS schools provided a wide variety of services in the health area, and about 80 percent of the schools had at least some compensatory nutrition services.

- The nature of the special services provided to students in the sample was quite diverse. Programs differed widely in terms of staffing, use of materials, program emphasis and techniques, relationship to regular instruction, and location of the CE classes. Although about half of the compensatory programs reported use of diagnostic-prescriptive techniques, the manner in which this was done varied considerably.

THE ISSUE OF INSTRUCTIONAL SETTINGS

Because of the recent controversy regarding the relative merits of various delivery mechanisms for compensatory services, we took a close look at the issue of instructional settings. Instructional groups were classified into four categories:

Regular - Instruction from a regular teacher, not assisted by any specially-funded personnel, equipment, or materials.

Pullout - Instruction in which the students are separated from their peers for special services at a different location.

In-Class - Instruction where special services are provided in the classroom, with no separation of students from their peers to receive the services.

Self-Contained Classroom - Instruction where all students in the classroom receive special services, staying together all day as a differentiated group.

Although there was wide variation among CE programs in the use of pullout instruction, in Title I pullout comprised 55 percent of the instructional groups. We contrasted groups in the various settings on measures of instructional process. Highlights of these contrasts are:

- We did not find the high incidence of negative aspects of pullout instruction that has frequently been suspected. Instead, we found characteristics that are educationally promising. The pullout setting was found to be associated with smaller instructional groups, higher staff-to-student ratios, more student on-task behavior, less teacher time spent in behavioral management, more harmonious classroom atmosphere, fewer negative teacher comments, and a higher quality of cognitive monitoring, on-task monitoring, and organization of activities.

- No setting-related differences were found in coordinating compensatory and regular instruction. That is, in-class instruction was not reported to be more coordinated with the regular program than pullout instruction.

- Comparisons were made to determine whether the settings were related to differences in total reading and math instructional time, and in overlap between material tested and material taught. Significant setting effects were found, with the pullout-and-regular combination and the pullout-in-class-regular combination found to be consistently high in instructional time. Significant setting effects were also found on the curriculum overlap measure (the degree to which the content of instruction matches or "overlaps" what it tested), but no clear interpretation of the results was apparent.

- Comparisons of curriculum overlap scores for regular versus low-achieving students showed that low achievers consistently received less instruction relevant to test content than did regular achievers. Thus, even though below-level tests were employed in a large proportion of the SPHPS schools, in many cases using these tests was not sufficient to produce parity of overlap with that for regular achievers. The advantages and costs of alternative testing approaches are discussed.

ATTITUDES TOWARD COMPENSATORY PROGRAMS

Findings from the principal interviews and from the thousands of pages of qualitative narrative protocols were drawn together to present a picture of the attitudes of principals, teachers, and students toward compensatory programs in their schools. In general, it was found that:

- Principals were well-satisfied with the effectiveness of their programs in terms of impacts on reading and math achievement. They also generally perceived the programs to have beneficial effects on participating students in areas other than reading and math achievement (such as on self-esteem and improvements in other subjects), and they perceived the programs to have beneficial spin-off effects on nonparticipating students as well. This sanguine outlook is only partly supported by the studies of achievement growth set forth in other SES reports.

- Qualitative evidence suggested favorable student attitudes toward the CE programs. While there was a mix of positive and negative attitudes among teachers, most comments were complaints or statements of particular problems experienced with the programs. The majority of complaints from both regular and CE teachers involved situations that could be improved by their better understanding of program guidelines and intents, better internal communication, and improved administrative monitoring.

- There is little evidence of stigmatization of students selected to participate in compensatory programs. Schools have developed procedures so that neither staff nor students felt particular concern over stigmatization, even for such a distinguishable program aspect as pullout.

In summary, the report brings together a wide range of data to present a picture of compensatory education, in all its diversity, as it was found to operate in 55 high-poverty schools. In spite of this diversity, the implementation of CE programs generally conforms to the intentions of their enabling legislation.

CHAPTER 1. METHODOLOGY

A sample of 55 high-poverty schools was selected for this study. Instruments were developed to supplement those in the longitudinal study. Experienced interviewer/observers were trained to collect data on reading and math instructional groups. A preliminary visit to each school obtained information required for planning the data-collection visit. In the follow-up visit, a two-person team visited each school for two weeks to observe classrooms and interview teachers and the principal. The visits resulted in extensive qualitative and narrative reports.

This chapter discusses the plans and methodology on which this report is based. First, we present the rationale for focusing on high-poverty schools. Instruments used from the logitudinal study and those developed specifically for this study are then discussed. Next, the data-collection procedures and the procedures for selection and training of interviewer/observers are presented. Finally, we discuss the complicated and important topic of units of observation and analysis.

THE SAMPLE

The study focused on high-poverty schools as briefly described here and, in more detail, in Appendix A of Report 16. First, we limited our attention to high-poverty schools because educationally disadvantaged students are of primary concern, and educational disadvantage is closely linked to economic deprivation. Second, we selected schools with the same grade levels, as certain characteristics may be expected to vary as a function of the number of grades housed in the school. Although most of the schools had complete grades 1 through 6 (the modal national configuration), a few schools having grades 1 through 5, 1 through 7, or 1 through 8 were studied in order to include enough high-poverty schools.

The index of poverty used for selection purposes was a composite based on parents' education and students' participation in free or reduced-price meal programs. The poverty index was aggregated to the school level to identify those schools in the Longitudinal Study that exhibited the greatest poverty. Fifty-five schools were selected to participate. We further concentrated resources by studying only grades 2 and 5, which represent the lower and upper elementary grades, are adjacent to all other grades in the 1 through 6 range, and can provide reliable test data.

INSTRUMENTS

In developing the instruments for the SPHPS, our objective was to collect data that would adequately and efficiently answer our questions about successful educational practices while minimizing the burden on respondents. Because the SPHPS schools were selected from those in the SES, new instruments were developed to supplement the data from the SES instruments. In general, the SPHPS data may be said to broaden the longitudinal data, which depend almost entirely on questionnaires and tests. By visiting schools, it was possible to use different kinds of instruments and to collect different kinds of data. Observations and interviews provided most of the new quantitative data, and, in addition, a Qualitative Agenda was used to collect data that we expected to be particularly difficult to formalize in advance. Whereas the Longitudinal Study was a survey effort, the SPHPS can be described as "in-depth."

The advantages of an "in-depth" method are apparent when we consider the types of instruments used. Observations are less obtrusive than direct questions, and are especially useful when the respondent is unable to provide accurate or unbiased information. Interviews are especially useful in obtaining information that is not readily observable in a short time, or when the respondent's own opinions, values, or assessments are of primary interest. Interviews are uniquely suited to the use of indirect questions, which may be the only means for obtaining valid data on issues that tend to elicit socially desirable answers. We also used a self-administered questionnaire to obtain information.

We now present a brief description of the longitudinal instruments that provided data relevant to our concerns, and then we describe in greater detail the new SPHPS instruments.

Instruments From the Longitudinal Study. The Comprehensive Tests of Basic Skills (CTBS) were administered to students in the fall and spring of the school year to assess achievement. The 1978-79 results provide the outcome measures for this study.

The Student Background Checklist (SBC) was the source for data on student poverty. An aggregate measure of this variable from 1977-78 was used in selecting the schools. The rationale and procedures for using this index are discussed in Appendix A of SES Report 16.

The Student Participation and Attendance Roster (SPAR) was one source of student-level data on time spent in instruction. The SPAR indicated the total time in reading and math in a typical week and the proportion of the time that students received various types of instruction (e.g., small-group instruction by a specialist). SPAR data were collected four times each year. Other sources of data on instructional time will be discussed in the next section.

The Teacher and Principal Questionnaires provided a variety of data:

- Most of the status variables on school and staff, e.g., years of teaching experience, amount of inservice training;
- Number of school days;
- Limited information on instructional leadership, program coordination, staff morale, school atmosphere (busing, intergroup relations, discipline), parent/community involvement, student placement and grouping practices, and instructional practices or philosophy.

Instruments Developed Especially for the SPHPS Study. An overview of the instruments specially developed for SPHPS is presented in Table 1-1. It gives the name of each instrument, a summary of its content, the respondent to whom it is directed (if any), and the occasion of its administration. The qualitative component (discussed later in this section) is not represented in Table 1-1 as data collection was situationally determined.

The Linkage and Scheduling Form (LSF) was a particularly critical instrument. During the preliminary site visit (described in the following section on data collection), interviewers and each teacher of second- or fifth-grade students examined up-to-date student rosters, so that the teacher could identify, by group, the students he/she was teaching, and indicate when and where the groups met. Groups were defined in terms of the subject matter taught (reading or math), the type of instruction (regular or compensatory/remedial) and their membership (the same students meeting together with the same teacher at common times).

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Table 1-1

Instruments Especially Developed To Study Compensatory Programs

Instrument Name and Content	Respondent	Administration
Linkage and Scheduling Form (LSF) Identification and characteristics of instructional groups, student-teacher linkages	Teachers of reading and/or math of 2nd or 5th grade students	Interviewer assisted completion during preliminary site visit
Classroom Observation Protocol (COP) Classroom practices, student behavior, teacher behavior, staff resources	No respondents	Two observations, each for the duration of the lesson (reading and math), during the two-week data collection for each instructional group identified on LSF.
Principal Interview (PI) Coordination of instruction, administrative leadership, compensatory education, parent involvement	Principals	At principal's convenience during two-week data collection
Principal Self-Administered Questionnaire (PQ-SA) Inservice training, use of specialists, compensatory health and nutrition, parent involvement	Principals	At principal's convenience during two-week data collection
Teacher Interview (TI) Coordination of instruction, administrative leadership, staff work relationships, compensatory education, resource use	Reading and/or math teachers of 2nd or 5th grade students	At teachers' convenience during the two-week data collection
Teacher Estimate of CTBS Overlap Amount of instruction during the current school year similar to the content and skills of the CTBS	Teachers of reading and/or math of 2nd or 5th grade students	Mailed, self-administered questionnaire, completed during the week following the CTBS posttest
Test Situation Questionnaire Students' familiarity with test procedure; number of students not performing their best because of poor attitude, poor physical condition or other unfavorable circumstances.	Homeroom teachers of 2nd or 5th grade students (and teacher who administered test if not the homeroom teacher)	Mailed, self-administered questionnaire, completed during the week following the CTBS posttest

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Several important needs of the study were served by this instrument. First, by identifying all instructional groups, we were able to preschedule the observations and determine more precisely the number of observers needed in each school. Second, because this instrument provided teacher-student linkages that were complete and verified, analyses in terms of different instructional-staff treatments were possible that would reflect the complex scheduling involved in much remedial and compensatory instruction.

The Classroom Observation Protocols (COP) were completed for instructional groups identified on the LSF. Two separate observations were conducted for each group, each by a different observer. Data on student behavior, teacher behavior, teaching practices, and staff instructional resources were collected. Students' on-task behaviors were assessed by scans that took place at five-minute intervals. Teacher behavior vis-a-vis students was assessed by recording the time the teacher spent in three types of behavior: instructional management, behavioral management, and off-task behavior. Three other teacher-behavior variables and two classroom variables were rated at the end of the observation: the extent to which the teacher monitored students' understanding; the extent to which the teacher monitored students' attention to work; the frequency of teachers' negative comments; classroom tension/harmony; and the extent to which activities were conducted in a routine, "understood" fashion (referred to elsewhere as "organization of activities").

Data on staff instructional resources consisted of the type of staff who had instructional responsibilities with the group, and the size and number of subgroups assisted. The duration of instructional involvement with subgroups of different sizes was recorded.

A Principal Interview (PI) was conducted with the principal of each school, to provide information on two school-level variables: administrative leadership, and coordination of instruction. Since comparable data on these variables were also obtained from teacher interviews, the discussion that follows is appropriate in the context of both the principal and teacher interviews.

Questions about how curriculum is decided enabled us to assess the degree to which the principal was involved in curriculum (according to his/her own reports and those of the teachers). This information was used in analyses designed to rate the principal's leadership in instruction. These same questions provided data on the extent to which other staff were involved (one of several indices of coordination), and pointed to other sources of leadership. Asking the principal his/her views of how reading and math should be taught, and asking teachers a comparable question concerning the principal's views, provided data on whether the principal expressed a point of view, how strongly the principal felt about it, and whether it had been communicated to teachers. Again, these were postulated dimensions of leadership. Support for the principal's views and the means by which they are communicated were assessed by asking how often teachers sought his/her advice, what other occasions prompted an expression of those views, and to what extent the principal influenced teaching. Coordination of instruction was indexed by asking the extent to which teachers were familiar with one another's instruction.

The principal was interviewed about the compensatory-education program(s) in those schools that had such programs, and was asked to describe the extent to which parents were involved in their children's schooling. The Principal Interview required approximately 40 minutes to complete.

A very brief Principal's Self-Administered Questionnaire (PQ-SA) was completed by the principal at his/her convenience during the two-week data-collection visit. The questionnaire concerned the use of specialists, inservice training, compensatory health and nutrition services, and parental involvement.

A Teacher Interview (TI) was conducted with all teachers of groups identified on the LSF. In addition to the questions described above (see Principal Interview), teachers were asked how they thought reading and math should be taught, what strategies they used to keep their students on-task, and what they did when a student was not making sufficient progress. Their answers were coded for the kinds of school-level support they reported, and were analyzed for the degree of commonality within a school. This interview also inquired about the work relationships between respondent teachers and other staff, about the activities of non-compensatory students while their peers were receiving compensatory instruction, and about resource use—in particular, specialists, equipment, and materials/supplies.

A substantial Qualitative Agenda (QA), designed to complement the quantitative instrumentation, completed the data collection by the observer/interviewers. The qualitative component was included as a means of enhancing the in-depth picture of schools and classrooms through use of techniques from the tradition of ethnographic inquiry. It did not use structured questions, and respondent burden was characteristically informal, minimally intrusive, and situationally determined. Ethnographic methods were particularly well suited to four activities relevant to this study: "fleshing out" or providing material to illustrate abstract concepts, providing descriptions that are understandable from an experiential perspective, aiding in the interpretation of quantitative findings, and generating hypotheses for subsequent verification. Although the qualitative component used ethnographic methods, it departed from that tradition in certain respects. Largely because of the fact that data were collected at relatively many sites on visits of relatively short duration, the inquiry was more structured than is the case in most ethnographic studies.

The Agenda resulted in descriptions of what was learned and observed (not inferred) in prespecified areas of interest. Data collectors made daily tape recordings summarizing informal but pertinent conversations and observations and organized the material into four narrative products:

Description of Compensatory Services, for each program

- Subject, number, and grade level(s) of students served
- Funding source(s)
- Mechanism for student selection
- Typical duration of services to pupils
- Staffing
- Scheduling of services
- Program emphasis or special techniques
- Relationship to regular instruction
- Staff relations within program and with regular staff
- Parental/community involvement in program

Description of Facility and Neighborhood

- Age and condition of building and grounds
- Architectural description of building

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- Kinds and conditions of buildings in the neighborhood (within about a 10-block radius of the school)
- Traffic and use patterns in the neighborhood (e.g., residential, commercial, freeways, heavily traveled streets, etc.)

School-Level Topical Summary

- Discipline
- Attitudes toward school and learning (staff, students)
- Staff enthusiasm/dedication/morale
- Principal and administrative leadership
- Principal accessibility (to students, staff, parents)
- Coordination of instruction
- Parent/community involvement

Classroom Qualitative Summary, for each instructional group observation

- Teacher behavior that affects student on-task behavior
- Other circumstances that affect student on-task behavior

Finally, two instruments were mailed for the teachers to complete immediately following the CTBS posttest. The Teacher Estimate of CTBS Overlap consisted of copies of the tests for the subject area(s) (reading and math) taught by the teacher. Each teacher was asked to examine the items and to indicate for each whether the relevant material was taught to at least 50 percent of the students in his/her class(es). Teachers were asked to respond separately for low-achieving and regular-achieving students. The very brief Test Situation Questionnaire requested information on how familiar students were with test procedures at the time of the test, and for estimates of the numbers of students who did not do their best because of poor attitudes, poor physical condition, or some other unfavorable circumstance.

PROCEDURES FOR DATA COLLECTION

Data-collection visits to the schools occurred on two occasions. During the first occasion, a two-day preliminary visit, interviewer/observers familiarized themselves with the sites and collected the information necessary for planning the second visit. During these preliminary visits, they met with the principal and teachers to confirm or clarify the status of compensatory programs, to identify all the second- and fifth-grade instructional groups, and to schedule classroom observations for each group. This pre-scheduling helped determine the number of data collectors needed at each site to complete the later data collection efficiently. As each instructional group was identified, the teacher was asked to use class rosters to record the number of that instructional group next to the identification number of each student in the group. A final objective of the preliminary visit was to establish rapport with the school staff and to answer any questions it had about the study or how the data collection would be handled.

Although many problems were anticipated and prepared for in the original one-week training session that preceded the preliminary visits, other problems could not be resolved until the field staff identified them during preliminary visits in the schools. A five-day debriefing and training session followed the preliminary visit, to resolve those problems, schedule the classroom observations, and determine the number of team members required at each school. In a second, two-week visit to each site, team members conducted all observations, distributed and collected the principal questionnaires, and interviewed the principal and all teachers of second- and fifth-grade regular and compensatory reading and math classes.

A major task during the two-week visits was to collect the qualitative data specified by the Qualitative Agenda. We exercised considerable care in training observers in the use of the Qualitative Agenda and in the logistics and quality-control of the data. One means for ensuring that the data were complete and of the highest possible quality was to provide each team with a cassette recorder for on-site dictation of information. In order to ensure maximum accuracy, team members were instructed to leave the school for an unobtrusive location as soon as possible to dictate information, using notes taken at the site to enhance their memories. In practice, observers rarely were able to leave the school during the day, and did the entire day's dictation in the evening. The tape-recorded field notes were mailed to SDC each week, and some of this material was transcribed while the teams were still in the field. This procedure allowed the analysis staff to monitor the data and make telephone requests for clarification or elaboration before data collection had ended.

Team members recorded observations of classroom events during reading and math lessons for each lesson observed. They made daily updates of school-level observations—although this practice sometimes consisted of only an indication that no new information relevant to a particular topic was obtained. Observers made two before- and after-school observations and three observations in the teachers' lounge (or equivalent), each lasting at least 15 minutes. Team members spent at least two lunch periods in the school cafeteria observing teacher/teacher, student/student, and teacher/student interactions. Wherever possible, team members made a total of two unobtrusive observations of activities in the school office.

A major objective of the Qualitative Agenda was to provide a narrative description of compensatory services provided at the school. Observers mixed informally with the school staff members and solicited comments on the operation of compensatory programs from as many sources as possible.

SELECTION AND TRAINING OF INTERVIEWER/OBSERVERS

Over the last few years, SDC has selected and trained interviewer/observers to collect data for several studies. Among these interviewer/observers, those who had demonstrated outstanding performance were considered for the present study. Others were selected through contacts with universities and private firms involved in educational evaluation. Priority in hiring was given to those who had experience collecting data and who were knowledgeable about elementary schools. An attempt was made to ensure that at least half of the interviewer/observers had experience in the collection of qualitative data. They were trained for one week in Santa Monica, went to the schools for the two-day preliminary visits, and then returned to Santa Monica for debriefing and additional training for five days before beginning visits to the schools.

The initial week of training familiarized the teams with the background and objectives of the study. This information included procedures for assuring anonymity of teachers and students, double-blind procedures used to minimize observer bias, and plans for ensuring anonymity of the schools. The teams became familiar with the instruments, their content, and procedures for using them. Videotapes of a variety of classroom situations were used in training. Trainees completed the observation instruments while viewing each tape, and reviewed and discussed their responses with the trainer. The tapes were replayed until the trainees had reached a pre-established level of agreement with the precoding of the tapes.

LEVEL OF ANALYSIS

The data for this study originate at several levels of the education hierarchy—the school, the teacher, the classroom and the student. The analyses that simply describe the data are generally at the level at which the data originated. However, for the analyses that attempt to relate treatments to outcomes, it was often necessary to aggregate data upward from lower to higher levels, or conversely, to spread data downward from higher to lower levels. While the choice of a particular level of analysis can be justified to some extent as a matter of preference or interest, it must be recognized that findings can and do differ depending on the level of analysis. It is undeniable that education is a multi-level phenomenon: schools differ in the programs they offer, teachers differ in their instructional practices, and students differ in the quality and amount of time they spend studying. All of these affect the achievement of individual students, the average achievement of classes, and the average achievement of schools.

This report includes analyses at five different levels: student, teacher, school, Observed Instructional Group (OIG), and Total Instructional Unit (TIU). The OIG and TIU levels of analyses replace the more familiar, but no longer viable, classroom unit of analysis, as explained below.

The Observed Instructional Group (OIG). Gathering the data so that they could be properly sorted and rearranged required special care. Although the data-collection unit that we observed, the Observed Instructional Group (OIG), has a quite tangible existence, it does not generally conform to the labeling or scheduling references used by teachers, students, and casual observers. At this point, we think an example may serve best to convey what our unit of data collection, the OIG, was.

For an example, let us take a small school where the reading staff consists of one regular teacher at each grade and a compensatory reading specialist. The regular teacher for the second grade, Mrs. Regg, schedules reading instruction from 9 to 11 every morning. It begins with her 26 homeroom students present, all engaged in reading activities. From 9:45 to 10:00 they break for recess. After recess, 16 of the original 26 continue the reading lesson with Mrs. Regg, while the other 10 students meet with the compensatory reading specialist, Ms. Spech, in a reading lab. At 10:30, these ten students rejoin Mrs. Regg and their 16 classmates and continue reading until 11:00. This describes all the reading instruction for all second-grade students. Let us consider how we dealt with this situation in terms of data collection. What instructional groups were there to be observed?

We defined an Observed Instructional Group as a group of students who remained together for instruction in the same subject from the same teacher(s). A break might occur during the period, or the entire group might move to another location, but the assigned student membership was to remain constant. If the membership changed during a teacher's instruction, a new group was formed, by definition. A new OIG was also defined if the teacher changed, or if the type (regular versus compensatory) or content (reading versus math) of the instruction changed. Because we intended to analyze second and fifth grades separately, OIGs were also defined in terms of grade.

Accordingly, for second-grade reading in the school of our example, there are three OIGs. One consists of the 26 students who remain together from 9:00 to 9:45 and from 10:30 to 11:00 for regular reading with Mrs. Regg. We will label this OIG #2101. Another consists of the 16 students who remain together from 10:00 to 10:30 for regular reading with Mrs. Regg

(OIG #2102). The third OIG consists of the ten students who remain together from 10:00 to 10:30 for compensatory reading instruction with Ms. Spech (OIG #2103). A schedule for all second grade reading instruction in terms of OIG's can be displayed as follows:

	9:00	9:45	10:00	10:30	11:00
Mrs. Begg	OIG #2101 (part 1) Students #01-#26	recess	OIG #2102 Students #01-#16	OIG #2101 (part 2) Students #01-#26	
Ms. Spech			OIG #2103 Students #17-#26		

In such a school, each of two observers would have conducted a separate observation for each of the OIGs. In addition, the student-teacher linkage data is in terms of OIGs. That is, we have student-OIG linkages, where for each OIG the identity of the teacher is also known. A case number was assigned to each OIG, and the ID numbers of all students in each OIG were linked to the OIG case number. (In our example, the numbering we show for OIGs is that actually used.)

The Total Instructional Unit (TIU). Because the Total Instructional Unit (TIU) is methodologically an extremely important concept in the SPHPS study, we have worked hard to develop a clear and simple explanation of it. Although it is not easily understood, we strongly encourage the reader to take the time to master this concept so this report will be fully understood. The Total Instructional Unit (TIU) is a *unit of analysis* (but not our only unit of analysis) and should not be assumed to be anything else. Although it is comparable to a class in that it is a subset of students within a school, it is not a group fitting any familiar organizational structure. *We did not observe TIUs as such.* To associate data with TIUs required a process of sorting and rearranging which we will explain presently.

The idea of the TIU developed as we thought about the complex ways instruction is arranged. As described above, students often receive instruction from more than one teacher, and moreover, different students from the same homeroom may receive instruction from different sets of teachers. It seemed to us that the appropriate unit of analysis was not a teacher's class, but a group of students who receive the same *total* educational treatment. In other words, the concept of the *Total Instructional Unit* (TIU) developed with a treatment-effects study in mind. From this point of view, a TIU is a group of students receiving a common educational treatment.

The sorting and rearranging required to construct the TIUs of our previous example will proceed properly if we consider a twofold question:

> Which students have a common educational treatment, and for each such group, what is the unique and common treatment they receive?

In this example, we find there are two TIUs. There is one group of 16 students whose *total* reading instruction consists of OIG #2101 and OIG #2102, and another group of 10 students whose total reading instruction consists of OIG #2101 and OIG #2103. The computerized procedure for establishing TIUs is quite straightforward. First, a list was made for each student of all the OIGs in which the student was enrolled. Next, this list was sorted in such a manner that all students who were enrolled in exactly the same set of OIGs were clustered together. In the example, this would appear as follows:

Student #	OIG #s	
01	2101, 2102	
.	.	
.	.	cluster that specifies TIU #001
.	.	
16	2101, 2102	

Student #	OIG #s	
17	2101, 2103	
.	.	
.	.	cluster that specifies TIU #002
.	.	
26	2101, 2103	

Once all the TIUs for a school have been established, two essential pieces of information are rendered: exactly which students have a common educational treatment in grade and subject, and exactly what the total treatment is, in terms of OIGs.

The procedure for spreading treatment data between the OIG and TIU levels involved the weighting of those data by the proportion of total TIU time accounted for by each associated OIG. Other files enabled us to aggregate data from students to TIUs, and to spread teacher-interview and questionnaire data, first to OIGs and then, through a TIU-OIG linkage file, to the TIUs. School-level data were spread directly to TIUs.

Table 1-2 summarizes the number of cases available at each of the five levels of analysis, and Table 1-3 shows the distribution of TIUs by size. The large number of TIUs consisting of a single student may seem startling. TIUs of size one represent a kind of individualization of instruction that we think is not usually recognized by teachers or others. TIUs of size one (and two) also necessarily represent multiple teacher treatment, since with our data they could not be obtained otherwise.

Table 1-2

Number of Cases for Different Levels of Analysis

Level of Analysis	Grade 2		Grade 5		
	Reading	Math	Reading	Math	Total
Student	3,686		3,337		7,023
OIG[1]	424	237	312	254	1,227
TIU	669	359	460	357	1,845
Teacher[2]	245	206	207	186	473
School	55	55	55	55	55

[1] The numbers are for the OIGs identified at the time of the data collection visit as qualifying for inclusion in the study.

[2] The total number of teachers is not the row sum, as many teachers taught both reading and math, and some taught both 2nd and 5th grades.

Table 1-3

Distribution of TIU by Size

TIU Size	Grade 2				Grade 5			
	Reading (n=669)		Math (n=359)		Reading (n=460)		Math (n=357)	
	N	Percentage	N	Percentage	N	Percentage	N	Percentage
1	218	33	65	18	117	25	77	22
2-5	260	39	100	28	158	34	100	28
6-12	105	16	67	19	97	21	71	20
13-19	41	6	56	16	49	11	51	14
20-26	32	5	51	14	18	4	35	10
27-33	13	2	20	6	21	5	23	6
Mean Size	5.5		10.2		7.1		9.3	
Median Size	2.7		6.9		4.0		5.6	
SD	6.60		8.98		7.71		8.83	

CHAPTER 2. OVERVIEW OF COMPENSATORY SERVICES

This chapter summarizes and highlights commonality and variability in aspects of the compensatory programs described by the on-site observers. The incidence of reading and math programs in the sample is discussed, with the programs classified as independent reading, independent math, and integrated reading and math.

Sources of funding are summarized, showing Title I, as expected, to be the primary sponsor for special services. Sections on the district-school interface and parent community involvement describe the diverse situations encountered by our observers. In general, however, levels of parent involvement were low.

Determination of student eligibility was reported to rely almost universally on standardized achievement scores, with teacher judgment the most widespread basis for selecting which students would receive services.

While the majority of programs were found to schedule daily services for a full year, the total amount of time students were scheduled to receive service varied widely from school to school and even within schools. A criticism of compensatory programs has been that compensatory instruction is often scheduled during regular instruction in reading, math, or other academic subjects. Our exploration of the issue showed that:

- *When regular teachers were asked what subjects were most often taught in the regular classroom at the time CE-served students received CE instruction, 48 percent of the teachers for whom the question was applicable reported regular reading or mixed reading and language arts.*
- *Forty-one percent of the regular teachers for whom the question was applicable reported that, at times when CE-served students received compensatory math instruction, the subject most often taught in the regular classroom was regular math.*
- *In very few cases were special or enrichment-type activities such as music, PE, or art mentioned as the subjects usually studied by regular students while other students received CE services.*

In interpreting these results, it is important to recognize that only a portion of regular reading or math is ordinarily missed by CE students in pullout classes. Moreover, it is usually seatwork that is missed, not direct instruction.

Data on health and nutrition services indicate that 56 percent of the SPHPS schools provided a wide variety of services in the health area, and that 45 of the 55 schools had at least some compensatory nutrition services. The most common service, found in 75 percent of the sample (41 schools) was the free or reduced-price lunch.

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Finally, it was found that special follow-up monitoring and treatment are generally not provided for students who have received CE services but for whom services have been discontinued.

A major theme in the next few chapters is that of the diversity of compensatory programs. We generally speak of compensatory programs, services, and education as unitary concepts (and even deal with them in some studies in this way). The reality, as we perceive it after looking at the narrative descriptions of compensatory services in the 50 schools with compensatory programs, is that knowing about one program frequently reveals little information about another. There are tremendous differences among and within programs on virtually all the dimensions we explored, as well as differences across schools in terms of the overall configuration of programs and cross-program relationships. Two schools were found to have highly similar programs. They were geographically proximate, and both had extremely minimal services. For the rest, no two schools were the same.

In this chapter and in the following one, we will attempt to depict this diversity, while at the same time making summarizing statements where possible.

First, we will describe the sample in terms of the numbers of reading, math, and combined programs observed. Then we will summarize and highlight the variability of the programs in a number of areas. Finally, information on activities missed during compensatory reading and math, and on health and nutrition services will be provided.

INCIDENCE OF READING AND MATH PROGRAMS

Fifty of the 55 schools in the SPHPS sample had one or more compensatory programs of some scope in reading and/or math, as summarized in Table 2-1.

An example of an integrated reading and math program is one in which students daily attend a combined reading and math lab area, alternating between the two halves of the lab on different days and drawing upon the services of a reading teacher, a math teacher, and a shared reading/math aide.

We have classified reading and math programs as "independent" where staffs, facilities, and the overall working of the programs are not shared. In Table 2-1 we already see the potential variability in compensatory services emerging in terms of the need and potential for inter-program relationships.

There is considerable variability in terms of the pattern of grades served in the schools. For example, in the 37 schools with independent reading programs, we found 16 different combinations of grades served. Table 2-2 summarizes, for each grade, the number of schools providing independent reading, independent math, and integrated reading and math programs for each of grades 1-6. In general, we were surprised to find no substantial concentration of programs in the earlier grades. Estimates of the number of students served in the compensatory programs ranged from 22 to 192 in independent reading programs, from 25 to over 242 in independent math programs, and from 22 to 341 in combined reading and math programs. Needless to say, the needs and problems of coordination and scheduling attendant to programs at the extremes of numbers of students served, could be expected to differ dramatically.

Table 2-1

Number of Schools With Each Program Configuration

Configuration	Number of Schools
No Compensatory Programs in Reading or Math	5
Reading Programs Only	8
Independent Reading and Math Programs	20
Integrated Reading and Math Programs	13
Independent Reading Programs, Plus Integrated Reading and Math Programs	6
Independent Reading Programs, Independent Math Programs, Plus Integrated Reading and Math Programs	3

Table 2-2

Number of Schools Providing Programs of Three Types, by Grade Level for Grades 1-6

Grade Level	Program Type		
	Independent Reading	Independent Math	Integrated Reading and Math
1	28	15	18
2	34	17	17
3	34	21	16
4	30	21	16
5	30	21	14
6	20	17	12

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In dealing with the descriptions of compensatory programs, it also quickly became clear that in some cases, although there may be nominally only a single "program," there are several distinct components within the program. An example of a program with multiple components is a Title I reading program serving students in grades 1-6 in:

1. a two-teacher lab which serves students in grades 1-4 in groups of 8 for at least 30 minutes a day, using the Hoffman Language Arts Reading Program as the basic instructional support system;
2. a Verbal Skills Center staffed with 2 teachers and an aide serving groups of 17 students (grades 3-6) at a time, using the New Century Verbal Skills Program, which is heavily audio-visual in nature, during 45-minute sessions;
3. a reading resource teacher who meets with small variable groups of second- and third-grade students with relatively non-severe problems for 2 or 3 days weekly to remediate diagnosed skill weaknesses; and
4. a remedial reading teacher who meets on a daily basis with groups of five-ten students with severe reading problems for individual and small-group instruction (150 minutes per week, minimum), using the Hoffman Basic II System.

In a sense, then, the component, not the program, is the lowest common denominator, the appropriate unit of analysis for descriptive summaries and analyses. Table 2-3 gives the numbers of programs and components described by SPHPS observers for each of the three types of programs (independent reading, independent math, and integrated reading and math).

The total numbers of components will be referenced from time to time in subsequent discussions, since the component was used as our primary unit of analysis.

Table 2-3

Numbers of Programs and Components in SPHPS Schools for Three Types of Programs

Program Type	Total Number of Programs Operating in SPHPS Schools	Total Number of Components in the Programs
Independent Reading	42	47
Independent Math	24	28
Integrated Reading and Math	26	27

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SOURCES OF FUNDING

Table 2-4 shows the number and percent of Observed Instructional Groups (OIGs) receiving no special services and special services provided by Title I, Title I and other-CE (primarily state CE), other-CE, and non-CE but special funding. Non-CE but special funding includes services under such programs as Title I migrant, Title VII bilingual, and special-education.

Table 2-4

Summary of OIGs by Funding Source for Special Services

Funding Source	Number of OIGs	Percent of OIGs
No Special Services (Regular Classrooms)	562	45
Title I Funding Only	378	30
Title I and Other-CE Funding	129	10
Other-CE Funding Only	100	8
Non-CE but Special Funding	88	7
Total	1,257	100%

Of the 1,257 OIGs, 30 percent received special services funded by Title I only, and another 10 percent received special services associated with Title I and other-CE funds. Eight percent received special services associated with non-Title I CE funds, and 7 percent received special services from non-CE but special funding sources. Title I is obviously the most common source of compensatory services.

DISTRICT-SCHOOL INTERFACE

For 29 of the 50 schools with compensatory reading and/or math programs, observers volunteered information about the relationships between school and district-level program staff. Observers had not been specifically asked to address this topic in their narrative descriptions of compensatory programs or in their daily topical summaries.

In one school, the link between the school and district staff was rather solid, as the vice-principal also served as the district official in charge of all district funds. In ten other schools, district compensatory supervisors or coordinators were said to be directly and actively involved in some phase of the schools' CE programs. The three in-school functions of the district personnel that were cited, either singly or in combination, were supervising instruction, coordinating instruction, and supervising materials.

For seven schools, low involvement of district personnel with school staff and programs was reported. In one of these schools, both the compensatory reading specialist and the compensatory math specialist felt that activities of their supervisors were largely irrelevant and had no impact on the programs in their schools. Another school was theoretically served by two district-level math resource teachers. The math specialist at the school, however, said she had requested but never received help from either. She stated that the resource teachers seemed to devote their efforts solely to preparation for weekly district in-service meetings rather than providing in-school assistance to individual teachers. In a third school a compensatory supervisor was said to be available to provide assistance on a request basis. The teachers rarely or never felt a need to request such help, however.

In nine districts, teachers mentioned the scheduling of regular meetings and/or workshops, ranging from once a week to four times a year. This strikes us as a clear-cut case of selective reporting, since we feel sure that district meetings and workshops for compensatory-program staff are universal or almost so. Presumably, the nine people who mentioned the district meetings were either being more complete than others in describing their programs, or found them to be more important to their jobs than CE teachers in other schools.

Similarly, reports bearing on district control versus building autonomy for CE programs tended to be spotty. In three cases, districts were said to exercise complete control over the expenditure of compensatory funds for personnel, equipment, and materials, while one district was said to arrange yearly meetings with principals to receive their inputs on the equipment and materials needed at their schools. In this particular case, the principal, in turn, sought the advice of his CE teachers. In several other cases the compensatory teachers themselves were said to be the basic source of decisions about purchases of equipment and materials. In five schools, the district was said to exercise close control over decisions regarding curriculum guidelines, schedules, grades served, program setting, teacher qualifications, or a combination of these areas.

A very interesting situation illustrative of the issue of district control was related by two compensatory teachers in one school. A previous superintendent had committed the district to use of a particular curriculum system, and the decision had been rescinded by the new superintendent without consulting compensatory teachers in the district. Teachers at this school had protested the action, and were eventually allowed to contract with an independent vendor to set up a diagnostic-prescriptive lab in keeping with their wishes.

It is clear that there is a great variability among schools in terms of how the interface between district and school-building is accomplished, and we suspect that the manner in which that interface is accomplished has substantial impact on teacher and principal morale, job satisfaction, and attitudes towards the CE programs. We raise the issue and present our meager fund of information so that future studies may focus on this area, which seems to have been largely overlooked in the past except for isolated inquiries into particular areas such as type and quantity of in-service training provided by the districts.

PARENT AND COMMUNITY INVOLVEMENT

In general, fairly low levels of parent/community involvement were reported in conjunction with compensatory programs in SPHPS schools. Also, many of the activities that were cited by program informants were, in fact, school-sponsored rather than program-initiated events (e.g., school-wide open houses associated with PTA meetings). Fewer than ten programs had active parent volunteers working in the classrooms, with Follow Through classrooms tending to dominate this small group.

In a number of cases, program informants did not mention Title I Parent Advisory Councils (PACs) in their discussions of parent and community involvement, indicating that in some cases the PACs may exist largely on paper. One marginally-functioning PAC was described as follows:

> There is no regular parental or community involvement in the program . . . In order to comply with Title I regulations, there are four PAC meetings with the teachers. The first meeting was well-attended, but the attendance dropped off radically by the last meeting. The Title I reading instructor said that this is very common, that the only meetings that are well attended are the first one and the last one, at which the teachers and the parents discuss what will happen to the students during the following year. Apparently the PAC meetings have only been established in the last two years. Before this, they had been omitted.

Other PACs are clearly functioning as intended. For example, one account submitted by an observer reads as follows:

> The representatives from this parent council meet regularly to discuss the Title I reading and math program, and with their input help with the decision-making on policies of the program. As Mrs. A. said, "We often invite the parents to meet with us regularly so that they may have some say in Title I program development." She said they meet regularly to help with decisions. Clearly they occupy a subsidiary yet important role.

In that same program:

> Every six weeks a parent-involvement program group meets and is given instruction on how to work with their children. The parents are taught the skills and games that are used in the Title I reading program. They are taught by a contract person assigned to that particular school. The parents, in turn, teach these skills to their children. These parent-involvement groups meet at the school at a time which is convenient for the parents.

There were overtones of discouragement in some of the reports:

> When asked about parental or community involvement in this program, Mr. J. reports, "Parent-community involvement is written in the program. There is a family worker who is supposed to get in touch with the parents and tell them what's going on, but she comes infrequently because she's kept busy with other matters. The parents themselves are more than free to come up and speak with me, or, if I have a problem, I do get in touch with the parents. The program calls for having workshops, but the workshops have been very unsuccessful in the past. Maybe one or two parents will show up. I myself, for those reasons have never had any yet. However, it is written in for the parents, for parental involvement."

One of the more active programs in terms of parent involvement had functions such as: a Title I pot-luck supper where everyone brought an "extravagant dish," and a very good percentage of the parents attended; letters sent home on the progress of each student, congratulating the parents on how well the student is doing, or, when appropriate, asking why the student is doing so poorly; a parent in-service program recruiting parents and grandparents for tutoring; a series of pamphlets sent home to parents on discipline, how to read books to your child, study habits, and so forth; and allowing children to select $5.00 worth of books that might encourage more reading by or to the child. At the time of this site visit, the principal was also trying to arrange for a bus to pick up parents and bring them to the school for Title I parent activities.

As these examples make clear, although almost all programs at least nominally involve parents and the community, there is wide variability in terms of what programs actually do in the name of parental involvement. A number of the schools acknowledged a problem in this regard, while in others parental involvement seemed to have very low priority, with little being done to increase involvement.

STUDENT SELECTION FOR COMPENSATORY SERVICES

As expected, student performance on standardized achievement tests was almost universally reported as the basis for determining eligibility to receive reading and math compensatory services. In one school, staff was only vaguely aware of the concept of eligibility, and functionally did not use an eligibility criterion, even though a district handout provided to SPHPS observers indicated that students scoring below the 50th percentile on achievement tests were considered eligible.

Eligibility cutoffs are specified in several metrics, with some programs using grade-equivalent scores, and others using percentile scores. Substantial differences in terms of degree of neediness of the students are implied by the range of cutoffs. Among the reading programs using percentile scores, for example, the cutoff points ranged from below the 51st percentile to at or below the 30th percentile. Schools also operate on different cutoff points for different grades. In one school, for example, eligibility cutoffs for the reading program were reported to be:

Grade 1 — test level B — below the 49th percentile;
Grade 2 — test level C — below the 31st percentile;
Grade 3 — test level C — below the 45th percentile;
Grade 4 — test level 2 — below the 33rd percentile;
Grade 5 — test level 2 — below the 47th percentile;
Grade 6 — test level 2 — below the 51st percentile.

As seen above, different levels of the achievement test were used in different grades. In general, each school has its own, situationally determined means of determining which students will be served, depending on factors such as the number of students that can be served, the total configuration of programs in the school, program organization, and number of eligible students. In several cases, all students in the school receive program services, and in others all eligible students are served.

Where all students or all eligible students cannot be served, teacher recommendation coupled with knowledge of test scores is the most common method of selection. In some cases teachers recommend a certain number of pupils from their classes. Other priorities (e.g., grade level, service in math or reading, but not both) are frequently overlaid on the teacher recommendations, particularly degree of need. That is, among the teacher-nominated pool of students, students may be ranked from lowest to highest in terms of achievement, with students selected from lowest to highest up to the point at which the maximum number that can be accommodated in the program is reached. A few schools had extensive, highly formalized systems for selection, beginning with the teacher referral. In one program, for example, classroom teachers initiated the selection process by completing a standard form for students felt to be eligible and needy. Items on the form pertained to percentile scores on the most recently administered standardized achievement test, a teacher rating of the urgency of need, the student's history of CE participation, teacher-judged specific skill deficiencies, teacher comments on grade and retention history, health, absences, and so on. A total score was calculated as the indicator of level of need, and approximately the neediest 25 percent of the students were selected, up to the load limits of the two compensatory teachers.

Seven of the schools had programs in which the selection of students was a joint duty of the compensatory specialists and the classroom teachers, and in a handful of cases, principals, guidance counselors, curriculum supervisors, and even assistant superintendents variously had a role in the selection process. Five of the schools also had programs in which the compensatory teachers alone made the selections of students to be served. Finally, a few of the programs we looked at had selection stipulations such as, first priority going to students who lived in a federal housing project, priority going to students who were in the program in previous years, or, in the case of Follow-Through programs, to students who had participated in Head Start.

In reporting on their selection procedures, staff in a small number of schools candidly admitted that where all eligibles were placed and space was still available, teacher nominations were used to fill the spaces with students who were technically ineligible. The ability to serve all eligibles and more was certainly exceptional among programs in the sample, and selection procedures were consistent with the objective of serving needy students.

SCHEDULING OF SERVICES

Almost all of the programs studied scheduled services for students on a yearly basis, but there were exceptions. For example, of the 47 reading program components, 43 were scheduled on a yearly basis, although in nine cases there were specific provisions for allowing students to test out of the program at mid-year. One reading component scheduled students for a half-year, beginning in February. Another divided the year into four quarters of nine weeks. During the first three quarters, some regular classroom teachers opted to send a different group of students every one or two weeks. During the last quarter, there were only two weeks of compensatory instruction, as the rest of the quarter was devoted to testing. Finally, two reading components assisted students on an as-needed, not regularly scheduled basis for drill on skill weaknesses and extra help following absences.

Only 2 of 28 math components were scheduled on other than a yearly basis. One of these was scheduled in cycles ranging from four to six weeks, although some students attended all cycles and hence received services throughout the year. The other of these was scheduled on a semester basis, again with some students served the full year. For only one component scheduled on a full-year basis was it specified that students could test out at mid-year.

Similarly, only 2 of 27 integrated reading and math components were scheduled on other than a full-year basis. One was in session only for one semester, and the other consisted of an aide and materials provided to students on an irregular basis. In 7 of the 25 components on yearly schedules, students were reportedly tested out or had services terminated on the basis of teacher judgment at various times throughout the year. In one of these, the duration of attendance was said to range from a few days up to the full year, in another from three months to the full year, and in the other from two or three weeks up to the full year.

Thus, we see that saying a child receives CE services in reading in a given year can, in fact, mean anything from a bare few days to a full year of exposure to the services. There is also noticeable variability in the intensiveness of services within these yearly or sub-yearly calendar frames, although the vast majority of programs schedule daily sessions. Focusing on reading components highlights this variability. Of the 47 reading components, 39 scheduled daily sessions. Seventeen had the same time allocation for all grades ranging from 20 to 50 minutes. For 22 components, classes were of various duration according to grade, ranging from 10 to 105 minutes per daily session. The remaining eight components were scheduled as follows:

> Two scheduled students for three 45-minute periods weekly; one scheduled for 30- to 40-minute periods three times a week; one scheduled students for from three to five classes weekly, varying from 30 to 60 minutes each, depending upon grade; one scheduled students for 80-minute sessions of lab per week, plus two 40-minute sessions in class with an aide; one provided 20-minute daily sessions with an aide plus two 25-minute sessions per week with a specialist; and two scheduled students for 30-minute sessions two or three times a week.

Thus, while the majority of programs schedule daily compensatory services, the total amount of time students spend receiving the services varies widely from school to school and even within schools. It is easy to see the wisdom of studying services rather than designations in evaluating CE.

ACTIVITIES MISSED DURING COMPENSATION INSTRUCTION

Criticism of compensatory instruction has been raised, particularly for pullout types of programs, that students miss essential or highly desirable regular instruction while they are receiving compensatory instruction. Data gathered in the NIE compensatory-education studies indicate that this does occur in a substantial number of cases. Similarly, based on teacher questionaire responses in SES Report 13 (Hoepfner, ed., 1981), conclusions were drawn that while compensatory students receive more total reading and math instruction than do regular students, they pay a price for it in terms of other instruction missed.

During the teacher interviews, each regular teacher with students who received compensatory instruction in reading/math was asked the question, "When any of your students receive compensatory reading/math instruction, what subject are your non-compensatory students *usually* studying?" Tables 2-5 and 2-6 summarize the responses.

Activities Missed During Compensatory Reading. As Table 2-5 shows, regular reading or mixed reading and language arts block is most frequently being studied by regular students while CE students are receiving compensatory reading instruction. This was reported by 93 teachers, and accounts for 48 percent of the applicable responses. Three things should be pointed out immediately. First, the CE students are usually gone during only a portion of the total regular reading or reading and language arts time. That is, it is quite common for teachers to schedule a 90-minute block of time for regular reading, and CE students may be absent from the room for only 30 of those 90 minutes. Second, schedules are most frequently arranged so that CE students receive CE instruction during the time when the teacher is giving instruction to a subgroup, while other students are engaged in independent seatwork assignments. Thus, CE students are receiving CE instruction during their independent seatwork time rather than their concentrated instructional time with the teacher, which they receive at another time in their respective subgroups. Third, although CE students may be absent during regular reading and language arts time, they are not

Table 2-5

Subjects Missed by Compensatory Students While They Receive Compensatory Reading Instruction

Subject(s) Usually Being Studied by Non-Compensatory Students	Percent of 193 Teachers Responding
Regular reading or mixed reading and language arts block	48
Several subjects, including regular reading and/or regular math	15
Language arts	10
Several subjects, other than regular reading or math	7
Regular math	5
Social studies	5
Study period	4
Subjects missed varied and were not specified	4
Other (includes science, PE, penmanship, Spanish)	3

necessarily missing *any* instructional time in the subject. While we do feel it is relatively rare, in a few cases teachers are known to "make up" that time with the CE students at another time during the day while giving regular students a study period or free time. The same qualifiers apply to regular math instruction missed during CE math, or to other subjects missed during compensatory reading and math, with the tempering knowledge that subgroup instruction is less common in math than in reading.

After regular reading or reading and language arts block, the second most frequent response by teachers was that several subjects, including regular reading and/or math were usually being studied by regular students while CE students received compensatory reading. This response was given for 30 teachers, or 15 percent of those with applicable responses. Language arts was said to be missed during CE reading by 19 teachers, for 10 percent of the applicable responses. Thirteen teachers reported that two or more subjects *not* including regular reading or math occurred while students received CE reading. (The most frequently occurring combination reported under this category was science and social studies.) As shown in Table 2-5, regular math, social studies, study period, and other subjects were said to be missed with less frequency.

Table 2-6

Subjects Missed by Compensatory Students While They Receive Compensatory Math Instruction

Subject(s) Usually Being Studied by Non-Compensatory Students	Percent of 122 Teachers Responding
Regular math	41
Several subjects, including regular reading and/or regular math	16
Regular reading or mixed reading and language arts block	15
Several subjects, other than regular reading or math	6
Language arts	5
Social studies	4
Study period	4
Subjects missed varied and were not specified	4
Science	2
Rest period	2
Music	1

It is of some interest that art, music, and PE were very rarely mentioned as the subjects missed during CE reading. In at least some SPHPS schools there is a stated policy that missing these "enrichment," as opposed to academic, subjects is to be avoided (not to mention state laws in such matters). As discussed elsewhere (Chapter 4), scheduling for compensatory instruction is often troublesome, whether governed by such a policy or not.

Activities Missed During Compensatory Math. Findings for math closely parallel those for reading. As Table 2-6 shows, regular math is most frequently being studied by regular students while CE students receive compensatory math instruction. This was reported by 50 teachers, and accounts for 41 percent of the applicable responses.

Twenty teachers, or 16 percent of those with applicable responses, reported that several subjects, including regular reading and/or regular math were missed, and another 15 percent reported that regular reading or mixed reading and language arts block were the activities usually missed. In seven cases, several subjects other than regular reading or math were reported to be occurring during compensatory math instruction for CE students. These combinations were: art and music; social studies and science; language arts and social studies; social studies, science, art, and study skills; health science and social studies; and handwriting and story time. Language arts, social studies, study period, various unspecified subjects, science, rest period, and music were each mentioned by 5 percent or less of the responding teachers. Once again, as in reading, there were very few mentions of art, music, or PE occurring while students were receiving compensatory math treatment.

In many schools, then, compensatory students routinely miss portions of regular reading, regular math and other academic subjects in order to receive "supplemental" compensatory instruction in reading and math. These findings agree with those in Report 13 which revealed that the majority of non-participants were involved in reading and language arts activities when CE students received CE reading instruction, and math activities when CE students received CE math instruction. While compensatory-served students end up receiving more total instruction in reading and/or math than regular students, one can only wonder whether the students would benefit more if the instruction were in addition to *all* of regular reading and math instruction. A few school districts (not in our sample) reportedly accomplish this by extending the school day for compensatory students.

FOLLOW-UP MONITORING FOR DISCONTINUED STUDENTS

SES Report 11 from the Longitudinal Study (Kenoyer et al., 1980) addressed the question of what happens to compensatory students when services are discontinued. In essence, the findings were that after being discontinued from compensatory services for whatever reasons (e.g., no longer eligible due to improved test scores or promotion to a grade that has no CE services), previously served students usually receive no special attention or services but simply assume the position of any other regular or unserved students. In order to address this question in SPHPS, we asked principals whether any follow-up monitoring was provided for such students. Those who indicated there was some type of follow-up were asked to indicate what services were provided to students shown to be needy in the monitoring process.

Examination of interview results in conjunction with a review of a number of narrative program descriptions led to the same basic conclusion as Report 11, that when students' compensatory services are discontinued, they generally receive no special services or programmatic attention, but revert to the same status as other unserved, regular students. In no case was there a solid indication that systematic, special follow-up monitoring was employed beyond routine testing or teacher observation of students for purposes of determining eligibility or selection for compensatory services. Where special follow-up was claimed by the principal, albeit erroneously, the associated services said to be provided to students were almost all said to be placing the student back into the program. The few exceptions to this generalization involved receipt of services from sources other than the compensatory programs (e.g., the services of a psychologist provided by another non-compensatory program or from classroom teachers or student teachers). Thus, students whose compensatory services are terminated generally receive no special attention or services, but revert to the status of other unserved or regular students.

HEALTH AND NUTRITION SERVICES IN SPHPS SCHOOLS

Although assessment of compensatory health and nutrition services was not a focus of the SPHPS study, it was decided that some information on these services should be obtained to enhance the overall picture of compensatory services in the SPHPS sample. A series of questions in the Self-Administered Principal Questionnaire completed at the principal's convenience during the site visit was used to elicit the information.

Health Services. With respect to health services, principals were asked, "How many students at this school receive compensatory health service?" and to "briefly list or describe those services." Inspection of the responses led us to believe that the item functioned poorly. In several cases it was clear that the principal was reporting not on "compensatory" health services, but on regularly available district or state services provided to all children. While for these clear-cut cases data were edited to show no compensatory health services in the school, there were also other cases that seemed ambiguous and which were not edited in this way. One principal, for example, reported that all 256 students in the school received "public health benefits." Thus, a lingering suspicion developed regarding the consistency of the data.

Because of our suspicions about the quality of the data, we feel that it is appropriate to summarize the data only briefly and to stress our belief that a number of schools are erroneously classified as providing compensatory health services to students. Thirty-one of 55, or 56 percent of the SPHPS schools were classified as providing compensatory health services to students. The nature and scope of the services, as all too briefly described by most principals, varied widely. At the minimal extreme, services such as the following were described:

- Dental services — on call for indigent only.— approximately two per month.
- A school nurse visits the school one day each week (funded by Title I). Also sees other students if a problem arises.
- As-needed basis, home visits, etc., when referred by teacher or principal.
- Dental health.

More extensive services were also reported, such as:

- The Title I social worker . . . and the Title I nurse assigned to the attendance area render the following services: give health exams, refer students to appropriate community agencies, furnish transportation if needed, render financial aid if necessary.
- Special eye exams, complete physicals, neurological exam, hearing exam, or anything they feel a child needs.
- Full-time nurse. Dental, vision, hearing, health assessments and screening, referrals to agencies, counseling parent education, health education for staff. Eighty percent school psychologist — mental health assessments and screenings, referrals, and counseling.

Given the brevity of principals' responses and the fact that some of the services reported are probably not, in fact, compensatory in nature, we do not feel that we can provide a complete or an accurate estimate of the frequency with which various types of compensatory health services occur. As very crude indicators of the relative frequency of selected types of services, however, we note that of the 31 principals classified as having compensatory health services in their schools: 14 mentioned dental services, 12 mentioned general physical examinations, 9 mentioned hearing examinations, 5 mentioned referrals to agencies or practitioners, 5 mentioned psychological or counseling services, 4 mentioned health education for students and/or staff, and 3 mentioned free eyeglasses. Somewhat surprisingly, only 4 principals mentioned immunizations, and 3 mentioned providing clothing as a health service. Speech-defect examinations and free hearing aids were cited by only one principal each.

Nutrition Services. Provisions of nutrition services in SPHPS was assessed with items parallel to those for health services. Principals were asked how many students at their schools received compensatory nutrition services and were asked to list or briefly describe those services. Again, it is not clear that principals had a common interpretation of the term "compensatory nutrition services," just as discussed above regarding "compensatory health services." Table 2-7, however, summarizes the principals' responses in terms of the complete service configurations operating in the schools. Only ten of the SPHPS schools, or approximately 18 percent, were without some form of compensatory nutrition services. The most common service configuration, found in 19 schools or 34 percent, was both free or reduced-price breakfast and lunch. Forty-four percent of the schools reported various combinations of free or reduced-price breakfast and lunch, milk service and nutrition education services, and 4 percent failed to specify the services received.

Table 2-7

Incidence of Configurations of Compensatory Nutrition Service

Nutrition Service Configurations	Percent of 55 SPHPS Schools
None	18
Free or reduced-price breakfast and lunch	34
Free or reduced-price lunch	20
Free or reduced-price lunch and milk	11
Free or reduced-price breakfast, lunch, and milk	4
Free or reduced price breakfast and lunch and nutrition education services	4
Nutrition education services only	4
Free or reduced-price lunch and nutrition education services	2
Type of services not specified	4

Table 2-8 shows the data from a slightly different perspective, highlighting the prevalence of the various service components in SPHPS schools. Almost 75 percent of the schools offered free or reduced-price lunches, the most frequently reported service component, whereas about 42 percent offered breakfast. Fewer principals listed free or reduced-price milk services or nutrition education.

Results in SES Report 5 (Wang et al., 1978) from the longitudinal sample indicated that the overall percent of students receiving health and nutrition services was quite small, ranging from 4.2 percent in grade 6 to 6 percent in grade 2, and that receipt of such services was negatively correlated with students' family economic status and initial achievement scores.

While the SPHPS school-level data are not truly comparable, it is clear, as would be expected, that compensatory health and nutrition services are more prevalent in SPHPS schools.

CONCLUSION

In the majority of schools: compensatory programs were funded by Title I; standardized tests were used to determine eligibility and coupled with teachers' recommendations for selection, services were scheduled for a full year; non-CE students were instructed in the same subjects while CE students were receiving reading and math instruction; there was little follow-up monitoring of CE students; parent involvement was low; compensatory nutrition services were offered; and principals reported that compensatory health services were offered. On the other hand, considerable variability in compensatory programs was found in types of programs offered, grade levels and numbers of students served, eligibility cutoff points, total minutes per CE session, type and amount of school-district interface, and numbers and kinds of nutrition and health services. Further findings discussed in Chapters 3 and 4 support the conclusion that there is no Title I program as such. Title I indicates the funding source of many programs but does not describe the natures and characteristics of the programs.

Table 2-8

Percentages of Schools With Each of Four Basic Nutrition Services

Nutrition Service Component	Percent of SPHPS Schools
Free or reduced-price lunch	74
Free or reduced-price breakfast	42
Free or reduced-price milk	14
Nutrition education services	9

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CHAPTER 3. INSTRUCTIONAL SETTINGS AND TYPES OF COMPENSATORY SERVICES

Because of the recent controversy regarding the merits of various delivery mechanisms for compensatory services, we took a close look at the issue of instructional setting. Observed Instructional Groups (OIGs) were placed into a four-category classification of settings (Regular, Pullout, In-Class, and Self-Contained Classroom) preparatory to addressing questions regarding differences between compensatory and regular programs. Eight combinations of settings were found to reflect the year's treatment.

The nature of the special services provided to students is also discussed in terms of resources (i.e., staffing and materials), program emphasis and techniques, relation to regular instruction, and the location of CE classes. It was not possible to develop a typology of programs for this study. The reasons were that programs were found not to be unitary (i.e., many have multiple and different components or provide different services to different grades), that small numbers of programs serve common grade patterns, and that considerable diversity of technique would have to be subsumed under single labels to provide meaningful numbers of cases for analysis purposes.

In this chapter we bring our focus down to the classroom, rather than to the more administrative aspects of compensatory programs. First, we will explore the issue of instructional setting, and describe the classification system used with OIGs in our sample. The nature of the services provided to students in OIGs of the various setting types will be described, with our goal being to highlight once again the diversity of the services and practices observed in SPHPS classrooms. Narrative classroom descriptions have been included in the Appendices for readers interested in a closer look at the diversity and quality of the services and practices. Although there is considerable overlap among the appendices, Appendix A primarily contrasts *settings*, Appendix B primarily contrasts *lessons* and Appendix C primarily contrasts *classroom management*.

THE INSTRUCTIONAL SETTINGS ISSUE

Although the variety of program structures and instructional methods found in SPHPS schools is somewhat bewildering, the development of a classification of service settings at the OIG level proved to be a manageable task.

Controversy has been growing regarding the appropriateness or relative merits of several popularly-labeled systems for the delivery of compensatory services. In particular, use of "pullout" has been called into serious question (e.g., by Glass, 1970; and Glass and Smith, 1977). Definitionally, past treatment of instructional settings has been somewhat cloudy. NIE defined settings as follows:

> Pullout instruction is defined as supplemental instruction that is delivered to students outside the regular classroom. Mainstream instruction is supplemental instruction delivered within the regular classroom. (p.5)

On the other hand, Glass and Smith (1977) have defined "pullout" as:

> ...a method or type of school organization for remedial teaching of Title I eligible pupils. With this plan, Title I eligible pupils are pulled out of regular classes con-

> taining both eligible and non-eligible pupils and sent to different rooms to receive instruction from a remedial specialist teacher. (p.1)

A third category, a "saturated" setting, was also mentioned by Glass and Smith (1977), but no clear definition was provided.

These definitions are less explicit than desirable on some points. For example, it is unclear whether the primary distinguishing feature of pullout is taken to be the receipt of instruction in a location other than the regular classroom, separation from a peer group, or separation from a peer group that is mixed in terms of eligibility, or a combination of the three. Furthermore, the definition of Glass and Smith (1977) does not take into account the fact that students are frequently designated as eligible *separately* for math and reading services, is not stated to include compensatory programs other than Title I, and specifies a remedial specialist, not an aide, as the teacher.

Although there are problems with these labels and definitions, the scanty literature to date has worked within this framework, and several studies (NIE, 1976 and 1977; Glass and Smith, 1977) have indicated that the majority of compensatory instruction is delivered under pullout conditions.

These same authors have discussed a number of questions regarding the effects of the pullout delivery mechanism. Relying heavily on a review of studies in the areas of ability grouping and mainstreaming of the handicapped, the context from which the mainstream label has been borrowed, Glass and Smith (1977) concluded that:

> The "pullout" procedure *per se* has no clear academic or social benefits and may, in fact, be detrimental to pupil's progress and adjustment to school. (p. 7)
>
> In our opinion, the "pulled out" pupil is placed in moderate jeopardy of being dysfunctionally labeled, of missing opportunities for peer tutoring and role modeling, and of being segregated from pupils of different ethnic groups. (p. 5)
>
> One finds virtually no support for the "pullout" concept among educators or their professional organizations. Teachers worry that pulling pupils out of class creates discontinuities in their schooling and makes coordination of teaching difficult. Others worry that the regular classroom teachers will feel less responsible for pupils whose needs are presumably being met somewhere else by a specialist teacher. (p. 6)
>
> "Pulling out" disadvantaged pupils may reinforce a form of labeling and create expectations for failure in the minds of teachers and other pupils, or it may create expectations that the pupils "pulled out" will prosper since special efforts are being made in their behalf. (p. 41)

In the NIE Instructional Dimensions Study (Brady et al., 1977) the mainstream setting was found to be more effective than the pullout setting in terms of achievement outcomes for grade 1 reading, grade 1 math, and grade 3 reading. For grade 3 math, no difference was detected. In April of 1978, NIE sponsored a conference at which 40 of the approximately 600 teachers who had participated in the NIE study gathered to discuss and comment on the results of the study. One of the four areas of focus for the teachers' consideration was the issue of setting. As reported by Kennedy (1978), most teachers who worked in schools with pullout programs, as the vast majority present did, "acknowledged that compensatory education students were stigmatized and that this created management problems." Some of the teachers also believed that students were *not* labeled and stigmatized in environments involving frequent movement of all students to different locations and a variety of other activities such as gifted and talented programs, and were less likely to be stigmatized where similarities between the learning activities and materials of served and unserved students were emphasized. Teachers also felt that negative effects could be reduced by practices such as open discussions of individual differences of all kinds, ongoing counseling for all students to improve empathy and interpersonal skills, and providing success experiences for served students in other school and classroom situations.

The NIE teachers also recognized the potential for stigmatization in mainstream settings, however. One teacher who favored pullout instruction because of the opportunity it gave children to confront and overcome their problems was quoted as saying, "Children know they don't know how to read. The pullout situation gives them a chance to do something about it with someone who understands their problem." No consensus emerged from the conference regarding whether one or the other setting was superior in terms of impact on teachers and practices such as coordination.

It was beyond our ability in SPHPS to address all of the many assertions that have been made regarding instructional setting. We were, however, able to gather rich information describing delivery systems and anecdotal information which can provide some commentary relevant to the controversy.

We next describe our system for classifying settings. In Chapter 4 this classification is employed to make contrasts among the settings on a variety of process and outcome measures.

A CLASSIFICATION SYSTEM FOR INSTRUCTIONAL SETTINGS

Because previously-used definitions of setting seemed cloudy to us, we decided to develop a new system for classifying settings. Although a variety of sources could be drawn on the development of a classification system, the primary information available was the narrative descriptions of the compensatory programs in each school.

To understand what services were being provided to Observed Instructional Groups (OIGs), we conducted a comprehensive review of information about the OIGs in each school and the narrative descriptions of compensatory services for the school. By joint study of information from the observation protocols, Linkage and Scheduling Forms, Organization Charts, narrative descriptions of compensatory services, and in some cases the Classroom Qualitative Summaries, we were able to identify the special services, if any, being provided to each OIG, and to link the services to a funding source.

The Regular Setting. We took as a base, Regular OIGs that had a "regular" classroom teacher, no auxiliary, specially-funded personnel assigned on a regular basis, and no routine and substantial use of specially-funded equipment or materials. By "regular teacher" we mean a teacher who is not perceived by others in the school to be part of a compensatory or other special program, even though a portion of the teacher's salary may be paid by special funds. Essentially, then, we took "special services" to be anything different from or in addition to the services provided by a regular classroom teacher using non-programmatically funded equipment or materials.

In a first pass through the data, codes were assigned to each OIG to indicate the types of services received and the funding source(s) associated with any special services received. In keeping with definitions used in the Longitudinal Study, special-education or learning-disability programs, Title I migrant programs, and Title VII Bilingual programs were not considered compensatory. These were classified as non-compensatory but special funding sources. Several other services classified as being funded through non-CE but special funding sources were CETA-paid classroom aides, special city enrichment-program teachers, and district-paid remedial specialists who provided special services, but not as part of a special program.

Based on our review, we identified several basic, qualitatively different systems or settings for the delivery of compensatory services. A few general comments will be offered before definitions of these settings are presented. First, our review of the literature and of our program descriptions convinced us that the critical aspect of "pullout" instruction in most peoples' minds was separation from a group of peers for special treatment, rather than the fact that the special instruction occurred in a location other than the regular classroom.

Second, we felt that all OIGs receiving special services should be classified in terms of setting and retained in settings-related analyses, even though not all of the special services were compensatory. Only about 13 percent of the OIGs receiving special services were associated with non-compensatory funding sources, and it was our feeling that they should be included in analyses since our primary interests are in assessing the effects of special services and delivery mechanisms rather than funding sources or intents *per se*.

In addition to the base Regular classification described earlier, we defined three special service settings, which are described below.

The Pullout Setting. Pullout instructional groups are those composed of students who have been separated from their peers for special instructional treatment at a different location. A "different location" means a different room or at a remote distance within a large open space that amounts to being in a different room. A typical Pullout OIG might consist of four students from Mrs. A's class who leave for 30 minutes daily, to receive small-group help from Mrs. B., the Title I reading teacher, in her reading lab, while the remaining students do reading/language arts seatwork. A situation in which a CE specialist or aide takes a small group to the back of a regular classroom to work with while the regular teacher continues working with the remaining pupils at the front of the room would *not* be called a Pullout OIG, since students remained in the regular classroom in rather close proximity to their peers.

It is almost always the pulled-out students who travel to the other location, but we do not consider this to be a defining characteristic of the pullout setting. One of the OIGs classified as Pullout in SPHPS involves a case where, at an appointed time, a CE specialist teacher came to the classroom to work with a small group of pupils while the regular teacher and the remainder of the pupils left for activities in another subject at another location.

The status of the staff person providing the special services was also considered irrelevant to the setting classification. While a specialist teacher usually provides instruction (or supervises students as they receive instruction primarily from machines), this role is also frequently filled by aides.

The In-Class Setting. In-Class instructional groups are those in which special services are provided to all or part of an existing group of students with none of the students being separated from their peers to receive the services at a different location. We believe that the

In-Class designation basically corresponds to what many people call the mainstream setting. We prefer to use the term In-Class to avoid confusion with the special-education/handicapped context from which the term mainstreaming was borrowed.

The In-Class setting as we have defined it includes a rather diverse set of situations. The most frequent case is that in which an instructional aide is assigned to assist the regular classroom teacher. What is thought of as the "classic" in-class delivery system was seen only very rarely in our sample—the situation in which a reading or math specialist comes into the regular classroom to provide his or her own, independent instruction for eligible children, perhaps by taking a subgroup of students to a back corner while the regular teacher carries on with the remainder of the students. In some other cases specialists came into the regular classrooms but functioned in non-independent roles indistinguishable from those of most classroom aides. That is, they worked under the regular teachers' direction, teaching whatever skills were specified to individuals or groups of students that might change with each visit to the classroom. Also included in the In-Class setting are a small number of OIGs in which the only special service was increased use of equipment or materials.

As hinted above, the In-Class setting includes OIGs that vary widely in terms of exactly who receives direct special services. It is likely that all members of a group of 25 students benefit, either directly or indirectly, from the presence of an aide who assists the regular classroom teacher. While the aide may provide direct instructional services to only 5 of the 25 students, the remaining 20 presumably benefit because the teacher can now devote more time to each of their needs. Because of this circumstance and because SPHPS does not have data permitting finer distinctions, the special service is ascribed equally to all members of the OIG. However, we know that in reality there are several distinct service configurations (e.g., an aide who serves all students daily, versus an aide who serves the same 5 of 25 students daily all year, versus an aide who primarily serves 10 children but at various times during the year serves all other as well).

A future study with a larger sample might be able to expand a settings classification such as ours into a more defined taxonomy incorporating service types, pattern of students served, and setting. In our case, the numbers of students in the cells of the taxonomy would be far too low to permit meaningful contrasts among many cells. Also, systematic data on patterns of year-long use of aides and materials were not gathered.

One final illustration of the variety of situations we have classified as In-Class will be offered. Several of our In-Class OIGs involve taking an intact regular classroom, *en masse*, to a special lab. Thus, even though the location of the instruction is outside the regular classroom, we have called these In-Class OIGs because the group of students remains intact.

The Self-Contained Classroom Setting. Self-Contained Classrooms are those in which an intact group of students *all* receive a particular program, stay together all or most of the day, and are labeled and differentiated from other regular and/or compensatory classroom groups in the school. Some examples should serve to distinguish the Self-Contained Classroom setting from the In-Class setting.

Consider the contrast between an In-Class group, so classified because a Title I aide is directed by the homeroom teacher to assist during the morning reading period, and a Follow-Through classroom where students basically participate in an integrated day-long program with a teacher and aide trained to implement a particular Follow-Through model, using special materials. The Follow-Through classroom, unlike the In-Class OIG, carries a label that distinguishes it from other classrooms in the school. The students are in a sense isolated from the rest of their peers because they basically stay together all day and, probably more importantly, follow a completely different curriculum than the regular homeroom classrooms. A second example of a Self-Contained Classroom OIG is a learning-disabilities class, which is referred to in the school as "The L.D. Class," and which provides a separate, virtually day-long special program.

In our opinion these qualitative differences were sufficient to justify creation of another category, even though the number of cases in the sample was relatively small.

Application of the SPHPS Classification System. A total of 1,257 OIGs were classified into the Regular, Pullout, In-Class, and Self-Contained Classroom settings described above. Table 3-1 shows the resulting numbers of OIGs in each setting category.

Table 3-1

Number and Percent of Instructional Groups (OIGs) in Each Instructional Setting Category

Setting Category	Number of OIGs	Percent of OIGs
Regular	562	45
Pullout	311	25
In-Class	326	26
Self-Contained Classroom	58	4
Total	1,257	100.0

Given our rather broad definition for the In-Class setting, we find an almost equal number of Pullout (311) and In-Class (326) OIGs, with each setting containing close to 25 percent of the OIGs in the sample. The Regular category contains 562 OIGs, or about 45 percent, and the Self-Contained Classroom category only 58, or around 4 percent. This should of course not be equated with the number of students served within each setting. It is also important to recognize that many students, as demonstrated below, are provided with special services in more than one setting. Nevertheless, these figures suggest that pullout delivery systems may be less predominant than has been thought.

Table 3-2 displays the OIGs classified by setting and funding source. The 562 Regular OIGs are, of course, identified with no special funding source. It is of some interest to note that of the groups associated with Title I funding only, over half (55%) are Pullout, as compared with 36 percent of the Title I and other CE funding groups, 32 percent of the other, non-Title I CE funding groups, and 26 percent of the non-CE funding groups. This provides some empirical support for the contention advanced by some critics that pullout programs are frequently implemented primarily out of fear of violating Title I guidelines.

Table 3-2

Percentages of Instructional Groups (OIGs) of Each Service by Funding Source

Setting	Funding Source				
	No Special Services	Title I Funding Only	Title I and Other-CE Funding	Other-CE Funding Only	Non-CE but Special Funding
Regular	100	0	0	0	0
Pullout	0	55	36	32	26
In-Class	0	40	64	36	67
Self-Contained Classroom	0	5	0	32	7

Note: Numbers of OIGs are: No Special Services 562; Title I Only 378; Title I and Other 129; Other-CE Only 100; and Non-CE but Special 88.

SERVICE SETTINGS AND TYPES OF SERVICES

Table 3-3 summarizes the service configurations provided to SPHPS OIGs in the three setting categories associated with special services. Although the regular teachers are not considered part of the special services, their presence is shown to complete the picture.

Taken as a whole, Table 3-3 illustrates the variety in combinations of services that is subsumed when one speaks of compensatory-education classrooms. For the Pullout setting, the modal service configuration, found for 125 of 311 OIGs (40%), consists of the services of a compensatory or specialist teacher and use of special equipment and/or materials, with no aide and no regular teacher present. Next in frequency of occurrence for the Pullout setting is the group served by one compensatory or specialist teacher and one paraprofessional or aide and using specially-funded equipment and/or materials (112 cases, or 36 % of the Pullout OIGs).

For the In-Class setting, the modal case is the OIG served by a single paraprofessional in the presence of the regular teacher, with no special equipment or materials in routine use. This occurred in 200 of 326, or 61 percent of the In-Class OIGs. In another 63 cases (19%), this pattern of In-Class aide and regular teacher was found, but with the additional use of special equipment and/or materials. Compensatory or specialist teachers provided services to only 32 of 326 In-Class OIGs (10%). As mentioned earlier, in a number of these OIGs the instruction did not take place in the regular classroom; instead, the intact regular class came to a lab where students were variously instructed by the specialist, regular teacher, and paraprofessionals. For 20 of the In-Class OIGs (6%), special equipment or materials use by the regular teacher was the only special service.

Among Self-Contained Classroom OIGs, 34 of the 58 groups (59%) received services of the compensatory or specialist teacher, a paraprofessional, and specially-funded equipment or materials. In six other cases, two paraprofessionals assisted. In the remaining 18 cases the compensatory or specialist teacher was the only staff, with 12 of the 18 also using special equipment and/or materials.

Table 3-3

Percentage of Instructional Groups Receiving Each Kind of Service, by Setting

	Setting		
Services	Pullout	In-Class	Self-Contained Classroom
No special services Regular teacher only	0	0	0
1 CE or specialist teacher	6	2	10
Regular teacher 1 CE or specialist teacher	0	4	0
Regular teacher 1 Paraprofessional	0	61	0
Regular teacher 1 CE or specialist teacher 1 Paraprofessional	0	1	0
Regular teacher Special equipment/materials	0	6	0
1 CE or specialist teacher Special equipment/materials	40	1	21
1 Paraprofessional Special equipment/materials	11	2	0
Regular Teacher 1 Paraprofessional Special equipment/materials	0	19	0
1 CE or specialist teacher 1 Paraprofessional Special equipment/materials	36	0	59
2 CE or specialist teachers 1 Paraprofessional Special equipment/materials	2	0	0
2 Paraprofessionals Special equipment/materials	1	0	0
Regular teacher 2 Paraprofessionals Special equipment/materials	0	2	0
1 CE or specialist teacher 2 Paraprofessionals Special equipment/materials	3	0	10
Regular teacher 1 CE or specialist teacher 2 Paraprofessionals Special equipment/materials	0	2	0
1 CE or specialist teacher 3 or more paraprofessionals Special equipment/materials	1	0	0
Regular teacher 1 CE or specialist teacher 3 or more paraprofessionals Special equipment/materials	0	0	0

Note: Total numbers of OIGs in each setting can be found in Table 3-1.

SETTING CLASSIFICATION AT THE LEVEL OF THE TOTAL INSTRUCTIONAL UNIT

The initial classifications into four setting categories described above were conducted at the OIG level. To describe the complete educational experiences of SPHPS students for the year, it is necessary to move the information to the Total Instructional Unit (TIU) level.

As seen in Table 3-4, eight combinations of settings result at the TIU level when we consider the setting classifications of all OIGs with which the students were associated. Note that the entire school year's experience is represented in these combinations. Thus, TIUs that show a combination of Regular plus Pullout plus In-Class may or may not have been receiving instructional services in all three settings for the entire school year. Students in such a TIU might have been in both Regular and Pullout OIGs during the fall semester, for example, and may have been transferred into one or more In-Class OIGs for the spring semester (which replaced the Regular and Pullout OIGs). Because so few TIUs were found to have combinations of the Self-Contained Classroom setting with other settings (which appeared to represent mid-year transfers into or out of Self-Contained Classrooms), these were simply pooled into a single category labeled Self-Contained Classroom. This category, then, contains all TIUs associated with *any* Self-Contained Classroom OIGs, as opposed to TIUs associated *only* with Self-Contained Classrooms.

As might have been expected from the OIG-level data, more TIUs (30%) and more students are classified as Regular Only than are classified into any of the other categories. The next most frequent category is the Pullout and Regular category, which accounts for 23 percent of the 1,875 valid TIUs in the sample. The In-Class Only and Pullout and In-Class combinations are very close in frequency, with each occurring in about 17 percent of the TIUs. Each of the other combinations accounts for less than 5 percent, with the Pullout Only category accounting for only 1.7 percent. Some of the TIUs classified as Pullout Only probably represent data linkage errors in which teachers failed to mention or interviewers failed to record additional groups for some students. We believe this may be the case since our qualitative information indicates that pullout instruction completely replaced regular instruction in only one school, which would not fully account for the 32 TIUs in this category.

Table 3-4 also shows substantial variability in average TIU size. In general, Regular Only, Self-Contained Classroom, and In-Class Only TIUs are considerably larger than those for the other classifications. These figures are not unexpected given the manner in which CE services are typically delivered and the amount of mid-year schedule changes in the schools.

We have seen that defining settings as we did, pullout delivery systems do not dominate compensatory education to the extent reported in other literature. We have also seen that there is true diversity in the types of special service configurations found, across all settings, and that many students receive CE services in more than one setting. In the following sections we will look at the program emphasis and special techniques described to us by onsite observers in their narrative descriptions of programs.

COMPENSATORY PROGRAM EMPHASES AND TECHNIQUES

As indicated above, the nature of the services delivered in the SPHPS compensatory programs ranged widely. At the extreme of minimal service, for example, was a school where the compensatory "program" included no direct instructional services but provided only a single resource aide who essentially ordered materials and dispensed them to regular teachers.

Table 3-4

Number and Percent of Total Instructional Units, Total Number of Pupils, and Average TIU Size for Each of Eight TIU-Level Setting Classifications

Setting Combination	Number of TIUs	Percent of TIUs	Number of Pupils	Average TIU Size
		Grade 2 Reading		
Regular Only	183	27	1,658	9.06
Pullout Only	9	1	24	2.67
In-Class Only	91	14	816	8.97
Self-Contained Classroom	18	3	222	12.33
Pullout and Regular	202	30	519	2.57
In-Class and Regular	36	5	117	3.25
Pullout and In-Class	105	16	246	2.34
Pullout, In-Class and Regular	25	4	67	2.68
TOTAL	699	100	3,669	5.48
		Grade 2 Math		
Regular Only	140	39	2,152	15.37
Pullout Only	6	2	15	2.50
In-Class Only	62	17	755	12.18
Self-Contained Classroom	16	4	212	13.25
Pullout and Regular	47	13	162	3.45
In-Class and Regular	6	2	37	6.17
Pullout and In-Class	76	21	300	3.95
Pullout, In-Class and Regular	6	2	14	2.33
TOTAL	359	100	3,647	10.16
		Grade 5 Reading		
Regular Only	130	29	1,338	10.29
Pullout Only	10	2	30	3.00
In-Class Only	84	18	948	11.29
Self-Contained Classroom	19	4	180	9.47
Pullout and Regular	111	24	330	2.97
In-Class and Regular	21	5	156	7.43
Pullout and In-Class	75	16	269	3.59
Pullout, In-Class and Regular	10	2	35	3.50
TOTAL	460	100	3,286	7.14
		Grade 5 Math		
Regular Only	102	29	1,460	14.31
Pullout Only	7	2	14	2.00
In-Class Only	82	23	1,064	12.98
Self-Contained Classroom	20	5	180	9.00
Pullout and Regular	67	19	250	3.73
In-Class and Regular	21	6	155	7.38
Pullout and In-Class	52	14	171	3.29
Pullout, In-Class and Regular	6	2	28	4.67
TOTAL	357	100	3,322	9.31

At the other extreme were programs such as one featuring a combined reading and math lab in which pupils received daily 30-minute pullout sessions using a high technology, individualized curriculum. One school had a purely "tutorial" program in which aides gave remedial assistance to groups of one to five students, with the group membership considerably in flux throughout the year. Another very unusual program focused on training regular classroom teachers to serve Title I-eligible students in the regular classroom using diagnostic-prescriptive techniques and CE-funded special equipment and materials.

While there are certainly similarities among many of the programs, particularly in terms of the special emphasis or techniques used, the number of programs or program components using some particular technique is rather small. Attempting to label those techniques (e.g., "diagnostic-prescriptive emphasis"), one very quickly finds that if meaningful numbers of programs are to be grouped under a given label, the label may have to be so broadly defined as to be almost meaningless. For example, while one might categorize 20 reading programs as "diagnostic-prescriptive," this might include two CAI labs, five programs with sophisticated commercial curriculum-management systems keyed to prescriptions on various machines or in various materials, three programs in which instruction is loosely geared to identified skilled weaknesses as determined by pretesting with a district-made criterion-referenced test, and so forth.

It also becomes clear from study of the descriptive protocols and other materials that because a program provides several different types of services (e.g., a pullout lab, in-class aides, and tutorial services by a specialist), it does not necessarily follow that all served students receive all program services, nor that they receive services of the same type to the same degree.

Because we found substantial differences among various program components, few programs serving common grade patterns, considerable differences in many cases among services or practices in different grades in the same school, and considerable diversity in program techniques which would have to be subsumed under a common label to provide a meaningful sample of cases for analysis purposes, we do not feel that it is worthwhile to develop a program typology. We will, however, describe and summarize here the diverse reports we received in our narrative protocols regarding program emphases and special techniques.

Key Equipment and Materials. Using a consensus mode, two staff members classified the use of special equipment and materials for each reading, math, and integrated reading and math program as high, medium, or low. An example of high use is a program which spends $1,800 to $2,000 annually on materials and supplies, with about $1,200 spent for replacement of consumable materials and $600 to $800 spent on new, durable materials. Among the materials central to the program are: tape programs and cassettes, a textbook series, tutorettes, pacer machines, tape recorders, audio-visual machines, record players and records, Duquesne machines, the Creature Teacher series, a number of instructional kits and games, and various supplemental and free-reading books. An example of a program classified as having medium use of materials is one which reported heavy reliance on three different instructional kits, a listening station, four reading series, and a magazine-audiotape set. An example at the low use extreme is a compensatory teacher who reported using primarily materials discarded from the public library and individuals' personal libraries. Another example at this extreme is a teacher who reported that there were no key pieces of equipment or materials in her program, and who used a wide variety of library books and dittoed skills sheets.

Table 3-5 summarizes the results of this classification of programs for independent reading, independent math, and integrated reading and math programs. It appears that integrated reading and math programs tend to be most reliant on instructional equipment and materials (many of these are "high technology" labs), followed by independent reading programs. As might be expected, a smaller percentage of independent math programs than any other type are rated as relying heavily on equipment and materials.

Table 3-5

Percent of Program Components of Each Type With Low, Medium, or High Use of Equipment and Materials

Degree of Use	Independent Reading Components	Independent Math Components	Integrated Reading and Components
Low	29	18	27
Medium	45	61	27
High	26	21	46

Table 3-6

Percent of Program Components Citing Various Program Emphases and Special Techniques

Technique or Emphasis	Independent Reading	Independent Math	Integrated Reading and Math
Small Group Instruction	60	32	59
Diagnostic-Prescriptive Approach	64	46	48
Use of Varied, Interesting, or Special Equipment/Materials	28	36	26
Provision of High-Motivation, Enjoyment and Success Experiences	28	4	4
Use of Rewards or Positive Reinforcement	21	4	33
Use of Traditional Structured Teaching and Drill	17	50	0
Concentration or Oral Language	36	0	4

Note: Percentages add up to more than 100 because programs can cite more than one technique or emphasis.

Program Emphases and Techniques. In one section of the narrative descriptions of programs, observers were asked to indicate what special emphases or techniques were used in the programs. Table 3-6 summarizes these findings. Small-group instruction and a diagnostic-prescriptive approach were very frequently cited as program emphases in all three types of components.

Use of varied, interesting, or special equipment was mentioned somewhat less frequently, but prominently, in all three types of components. Provision of high-motivation, enjoyment and success experiences was also a fairly popular response in independent reading, but not independent math or integrated programs. Use of positive reinforcement or rewards was fairly prominent in independent reading (21 % of components) and integrated reading and math (33 % of components), but not in independent math components (4 %). Incidence of traditional structured teaching and drill as a reported emphasis varied considerably among the three program types. It was cited for 17 percent of the reading components, 50 percent of the math components, and none of the integrated components. Finally, language arts or oral language was cited as a special emphasis in 36 percent of the reading components, 4 percent of the integrated reading and math components, and, not surprisingly, in none of the math components. There were also scattered mentions of emphasis or techniques such as fast pacing for high interest, team teaching, use of a question and answer technique, good management techniques, supportive guidance, and even use of rock and roll music to relax students.

At this point we wish to "unpack" the responses regarding use of a diagnostic-prescriptive approach in reading components to illustrate the range of practices actually subsumed under this label. Thirty of 47 reading components were said to be diagnostic-prescriptive in orientation. Of these 30, 13 used commercially-available curriculum organizers or management systems providing diagnostic tools and specific curriculum references (e.g., book, chapter, and page) as prescriptive options for diagnosed skill needs. Seventeen components did not use commercially-available systems, although some of the district-developed systems approached the commercially-available systems in sophistication.

Specifics of methods, materials, and techniques varied considerably across the 30 diagnostic-prescriptive components. In terms of class size, 13 involved small groups (7 students or less), 5 involved groups that were medium in size (8-15 students), one involved large groups (16 or more students) and 11 involved groups that ranged from small to large in size. The programs were generally conducted in pullout labs, and most rendered services on a one-to-one basis as well as in subgroup instruction. Exceptions were two components providing one-to-one instruction exclusively.

All diagnostic-prescriptive components included testing to determine skill deficiencies, but the timing and handling of the tests varied: in some cases there was extensive fall diagnostic testing, and only mastery testing subsequently, while in other cases diagnostic testing proceeded on a periodic or cyclical basis throughout the year. Most tests and student prescriptions and profiles were manually scored and produced by teachers, although computer-management was also observed in the sample. Also, in one program, students assisted the teacher in diagnosis of their needs and development of their prescriptions, and negotiated individual contracts. In this and several other components, students earned rewards for completing tasks. And of course there were many differences among the diagnostic-prescriptive reading components in terms of staffing location, and exact materials and management methods used.

"Diagnostic-prescriptive" is indeed a label that covers a great deal of ground, and that begins to lose meaning when we realize that the underlying philosophy, if not the exact materials and mechanics, can frequently be discerned in the classrooms of many teachers who "just teach, and give the ones having trouble extra help in spots."

Relationship to Regular Instruction. Another major source of variation among both diagnostic-prescriptive and other compensatory components pertains to their relationship to regular instruction. We will continue looking at reading components to illustrate this variation. Nineteen of the diagnostic-prescriptive components were said to be independent and did not routinely coordinate with regular classroom instruction. However, four specialists stated that they kept regular teachers informed of pupil progress, generally in a conference setting, while another four stated that they were responsive to requests for materials and suggestions from regular teachers. In one case, the class goes to the lab intact. In theory, only eligible students are supposed to receive instruction, while non-eligibles work independently on assignments given by the regular teacher before coming to the lab. In practice, eligibles and non-eligibles are treated alike, and all receive the treatment, with a specialist, three paraprofessionals and a regular teacher instructing small groups at learning stations. Although this is an independent program and the specialist specifically mentioned her attempts to avoid repeating skills covered in the regular classroom, she also reported that occasionally she asks about problems encountered in regular instruction and will work on them in small groups. In another case, an informant mentioned some conferring with regular teachers but not real attempts at coordination, even though there is supposed to be coordination according to the district manual.

Eight diagnostic-prescriptive programs or program components were said to reinforce regular instruction within the limits of their diagnostic-prescriptive frameworks. This included one program in which the lab teacher pretested with a criterion-referenced test to diagnose skill weaknesses. Then the lab teacher, regular teacher and lab aide all planned instruction for eligibies jointly. The aide and specialist also went into the classroom to serve the same students served in the lab. In another program, the regular teacher subgrouped and used compensatory materials and equipment only with eligibles, with pullout services also provided to some of the eligibles by an aide and a specialist. They helped the regular teacher plan instruction, and had a 40-minute conference weekly. Another program used the same diagnostic-prescriptive management system used by regular teachers. Individual needs as described by the regular teacher were emphasized in the lab. Finally, in one program, the regular teacher was required to send weekly lesson plans to the lab teacher who reinforced skills learned in the regular classroom under a diagnostic-prescriptive system as indicated in the lesson plans. In three multiple-teacher programs, one teacher was said to coordinate with the regular teacher as much as possible, while the others offered an independent diagnostic-prescriptive program.

Seven non-diagnostic-prescriptive reading components were reportedly independent of regular instruction. In one program, the informant stated that she worked on skill weaknesses from among those basic skills she wished to teach. Four specialists said they taught skills they thought students needed to know and made no effort to coordinate with regular instruction. Still another said she used student interests to get at their difficulties.

Seven other non-diagnostic-prescriptive programs were said to reinforce regular instruction. Two closely coordinated with the regular teacher and used the same basic text series. Another two reinforced concepts introduced in the regular classrooom, but used different materials. In addition to providing pullout instruction, a specialist in one program worked one hour a week in each classroom with small groups on needs designated by the regular teacher, so she was very informed and reinforced skills taught in the regular classroom. Finally, in one school one specialist coordinated with regular instruction and one did not.

Two of the reading components involve in-class and self-contained settings. In one, all members of the class benefitted from special materials and an aide, while served students were pulled aside for 20 minutes a day of "extra" small-group or private tutoring by the regular teacher and/or aide. In the other program, special materials are used three times a week for 45 minutes of the mandated 120 minutes of daily instruction with all students. Finally, there was one program that completely replaced regular instruction. The same basal reader was used as in the regular classroom, but additional materials and equipment were used for the compensatory instruction.

Within the sample of 47 reading components, then, we found programs ranging from those that were essentially independent of regular instruction, to programs that deliberately reinforced the skills being taught in the regular classes, to programs that replaced regular instruction. Again, complexity and diversity surfaced when we looked at detailed narrative descriptions of programs.

Location of Compensatory Classes. The vast majority of compensatory programs operated in well-appointed quarters ranging from classrooms and resource centers with large quantities of materials and supplies to labs containing a variety of equipment, curriculum materials, and supplies. Several, however, took place under less propitious conditions. Some quarters seemed extremely inadequate. For example, in one program with two aides, one taught in a hallway, while the other conducted classes in a combined office-kitchen-music room-lounge. At another school, the primary lab teacher was housed in a tiny closet with no blackboard. One math lab was described as small, triangular-shaped, sparsely decorated and acoustically terrible. In another program, the small room in which instruction took place adjoined the principal's office and was too small to accommodate many activities, which the observer felt hampered the program. Still another program took place in a small room with space for six students arranged in a crowded fashion. For several weeks out of the year, feedback teaching machines were brought to the school as part of the program. When the machines arrived, they were put on top of desks in the adjoining storage room. Again, there was room for six students. In these crowded conditions the supervising aide had attempted to create a partitioning system to enable students to work without distraction from neighbors. Other programs took place in a library storage room, a basement subdivided by partitions, and former classrooms subdivided by partitions. Descriptions of these quarters indicated inadequate conditions for teaching in terms of noise, crowding, and the absence of standard items such as wall-mounted blackboards and bookshelves.

In cases where observers complained of noise conditions, two circumstances seemed to be involved. First, in most of the rooms that were subdivided by partitions, two or three groups were often being instructed simultaneously, and the noise from adjacent groups was distracting. In one case where the problem was particularly severe, two paraprofessionals who shared a small, portable unit essentially took turns speaking to their groups because of the noise problem. Second, some labs or learning centers were located adjacent to high-noise, high-traffic areas. For instance, in one school the math and reading labs were located in an open-space area near a cafeteria where the classes were exposed to the noise of the traffic to and from the cafeteria. In addition, students entering or leaving the reading lab had to travel through the math lab.

Clearly, the quality of the instructional experience must suffer in those relatively inferior locations we observed. Perhaps one benefit of continuing declines in student enrollment will be relief from the problems associated with trying to find adequate classroom space for special programs in overcrowded schools, and CE classrooms may become more conducive to learning.

CONCLUSION

While we have stressed the variability of programs, we frequently found certain features more common to one type of program than another. The majority of Pullout instruction was funded by Title I; In-Class and Self-Contained services were mostly funded by a combination of Title I and other sources or just other sources. Most In-Class groups were served by a regular teacher and a paraprofessional; Pullout and Self-Contained groups were most often served by a specialist or specialist and paraprofessional, and used funded equipment and materials. The highest use of materials and equipment was discovered in integrated programs, probably accounted for by frequent use of high-technology equipment; independent math programs were found to rely least on equipment and materials.

In spite of wide variability in program emphasis and techniques used, all types of programs indicated wide use of small-group instruction and some type of diagnostic-prescriptive approach. Not surprisingly, the use of traditionally-structured teaching and drill was found most frequently in independent math programs. Most programs and components were described as reinforcing regular instruction, but the degree of reinforcement differed widely as did the amount of coordination with regular teachers. Narrative descriptions of classrooms are provided in the Appendices to further emphasize the diversity and quality of services and practices found in the SPHPS classrooms.

CHAPTER 4. SETTING DIFFERENCES AND INSTRUCTIONAL PRACTICES

Analyses were performed to determine whether groups in our four types of settings differed in terms of the instructional practices and processes used. Pronounced differences in the majority of variables under study were found between Pullout groups and groups in the other three settings. The Pullout setting was found to be associated with smaller instructional groups, higher staff-to-student ratios, more student on-task behavior, less teacher time in behavioral management, more harmonious classroom atmosphere, less negative comments by the teacher, and a higher quality of cognitive monitoring, on-task monitoring, and organization of activities. No setting-related differences in coordination between compensatory and regular instruction were found.

Total Instructional Unit-level comparisons were made to determine whether the settings were related to differences in total reading and math instructional time and in overlap between material tested and material taught. Significant setting effects on time were found for all four grade-subjects. The Pullout combination and Pullout, In-Class, and Regular setting combination were consistently high in instructional time. Significant setting effects were also found in all four grade-subjects on the curriculum overlap measure, but no clear interpretation of the results was apparent.

For all CTBS subtests in both grades and subjects, low achievers were reported by teachers to have received less instruction relevant to the test content than did regular achievers.

In this chapter we address jointly the two questions, "Does compensatory education differ from regular instruction in terms of selected characteristics and practices?" and "Do instructional groups in various settings differ in terms of characteristics and practices?"

DIFFERENCES IN SETTINGS AT THE OIG LEVEL

The creation of a four-category classification of settings for instructional groups was described in Chapter 3. To summarize briefly, each Observed Instructional Group (OIG) was classified as receiving either Regular Services, Pullout Services, In-Class Services, or Self-Contained Classroom Services. Whereas an OIG can be classified into only one category, the reader may recall that when the classifications of OIGs are moved to the Total Instruction Unit (TIU) level, these eight combinations of OIG settings represent the total educational treatment of students with respect to setting.

The reader should also be aware, following the earlier discussion in Chapter 3, that in the analyses reported here, not all of the OIGs classified as Pullout, In-Class, and Self-Contained Classroom Services are "compensatory" groups. A total of 88 of the 695 OIGs in these categories receive services supplied through special funding sources not classified as compensatory in our study (e.g., Title I Migrant, Title VII Bilingual, or special-education). We feel that it is appropriate to include these groups in our analyses since our interest is in assessing the effects of special services and delivery mechanisms rather than funding sources *per se*.

One way of addressing policy questions concerning "regular" versus "compensatory" instruction is to contrast Regular groups with Pullout, In-Class and Self-Contained groups on characteristics and practices of interest. The question of setting differences would be addressed by comparing Pullout, In-Class and Self-Contained groups and excluding Regular groups. We concluded that this approach had little utility beyond a single comparison of groups in all four setting classifications because of a clear pattern that soon emerged. In general, the mean for the Pullout setting is highest on the various practices, with the other three means lower and more clustered together in no consistent order. Averaging the Pullout groups with the In-Class and Self-Contained Groups for comparisons of "compensatory" versus "regular" groups simply operates to reduce the Pullout difference and produce generally non-significant findings. We therefore opted to address both policy questions in a single series of analyses comparing groups in all four settings simultaneously.

Staffing. Four staffing variables were selected to contrast the four settings: the number of students in the OIG, the paid staff-to-student ratio, the total staff-to-student ratio, and the paraprofessional-to-student ratio. Briefly (the variable source and construction for these indicators is described in more detail in SES Report 16), the measure for number of students present in the OIG is the average number of students present during the on-task scans taken every five minutes during observations. These were thought to be more realistic, given high absenteeism in many SPHPS schools, than data on the number of students assigned to each OIG. The other three staffing variables are also based on data from the classroom observation forms, where observers recorded the number of minutes that both paid and unpaid staff were present during each observation. To aid in interpretation, the three ratios have been constructed to represent the minutes per pupil per hour contributed by the three staffing configurations. For example, the figure 14.9 shown for the paid staff-to-student ratio for Pullout OIGs in Grade 2 Reading (Table 4-1) indicates that on the average, 14.9 minutes of paid staff attention were available per pupil per hour. This might represent, for illustrative purposes, an approximately 60-minute lab staffed by one specialist with four students present, or a 30-minute lab staffed by two specialists with four students present, or a 30 minute lab staffed by a specialist and an aide with four students present. The main point to keep in mind is that for all three staff ratios, a higher number indicates more available staff time.

As shown in Table 4-1, which summarizes the analyses of variance (ANOVAS) for setting differences, more resources have been allocated to the Pullout OIGs than to the groups in the other three settings in terms of both numbers present and staff-to-student ratios. This result holds over all grades and subjects. These results are consistent with results in Reports 5 and 10, indicating that CE students, relative to regular students, tend to receive instruction in smaller classes and more instruction in small-group settings.

Since the ANOVA results appeared similar in all four cells, an additional analysis over all grades and subjects was performed. As shown in Table 4-1, Pullout OIGs had an average of approximately 7 students present, as compared with about 16 students for the Self-Contained, 18 for the Regular, and 20 for the In-Class setting. Pullout groups once again showed a pronounced difference on the staff ratios, showing about 14 staff minutes per pupil per hour for both paid staff and total staff ratios, as opposed to about 6 minutes per pupil per hour for the next highest means. More paraprofessional minutes per student per hour are also available in the Pullout setting than in any other. The obtained .04 value for paraprofessional-to-student ratio in the Regular setting (rounded to 0.0) indicates that in a very small number of OIGs, persons identified by the observers as aides assisted the teacher even though according to our best qualitative information, no aides were regularly assigned to those OIGs. In all three pooled analyses, Regular groups showed the lowest staff ratios.

Table 4-1

Group Size and Staff-to-Student Ratios in Instructional Groups in Four Settings

Characteristics*		Instructional Groups: No Special Services	Pullout	In-Class	Self-Contained Classroom	Mean Square Between	F Between Groups
				Grade 2 Reading			
Number of Students Present	Mean	14.7	6.7	18.2	14.1	[illegible],707.51	53.968**
	S.D.	3.0	1.7	6.0	7.1		
	N	188	128	93	14		
Paid Staff-to-Student Ratio	Mean	6.4	14.9	6.4	6.4	2,100.98	56.017**
	S.D.	3.1	8.9	1.0	1.8		
	N	188	126	93	14		
Total Staff-to-Student Ratio	Mean	6.2	15.1	6.8	6.4	2,223.91	52.961**
	S.D.	3.2	9.4	3.9	1.8		
	N	188	126	93	14		
Paraprofessional-to-Student Ratio	Mean	0.2	5.0	0.1	[illegible]	381.26	22.[illegible]**
	S.D.	1.0	8.0	0.7	1.8		
	N	188	126	93	14		
				Grade 2 Math			
Number of Students Present	Mean	20.1	7.9	21.5	13.9	1,875.96	55.804**
	S.D.	8.7	1.9	4.9	7.8		
	N	121	40	62	14		
Paid Staff-to-Student Ratio	Mean	[illegible]	12.9	5.1	3.9	[illegible]	91.716**
	S.D.	[illegible]	7.2	2.7	1.9		
	N	121	40	62	14		
Total Staff-to-Student Ratio	Mean	1.8	14.1	5.3	3.9	[illegible]16.62	73.986**
	S.D.	1.8	7.2	1.8	1.9		
	N	121	40	62	14		
Paraprofessional-to-Student Ratio	Mean	[illegible]	4.8	1.7	4.1	149.12	48.[illegible]**
	S.D.	[illegible]	4.8	1.7	[illegible]		
	N	121	40	62	14		
				Grade 5 Reading			
Number of Students Present	Mean	18.8	7.0	21.0	17.1	[illegible],180.89	88.902**
	S.D.	4.1	1.4	4.9	4.7		
	N	127	85	83	15		
Paid-Staff-to-Student Ratio	Mean	4.8	10.1	5.1	5.1	1,156.16	92.522**
	S.D.	1.7	5.1	2.6	1.8		
	N	127	85	83	15		
Total Staff-to-Student Ratio	Mean	4.8	10.2	5.8	5.1	[illegible]	81.863**
	S.D.	1.8	5.1	3.4	1.8		
	N	127	85	83	15		
Paraprofessional-to-Student Ratio	Mean	[illegible]	1.4	1.8	[illegible]	184.38	29.[illegible]**
	S.D.	[illegible]	4.4	1.5	1.3		
	N	127	85	83	15		
				Grade 5 Math			
Number of Students Present	Mean	21.4	7.8	22.2	17.8	3,754.34	85.442**
	S.D.	8.1	[illegible]	5.6	5.6		
	N	105	57	77	15		
Paid Staff-to-Student Ratio	Mean	3.8	10.1	5.3	5.8	1,139.19	81.420**
	S.D.	[illegible]	5.4	4.0	[illegible]		
	N	105	57	77	15		
Total Staff-to-Student Ratio	Mean	3.8	10.0	5.7	5.8	1,116.86	74.[illegible]**
	S.D.	3.4	5.4	4.4	[illegible]		
	N	105	57	77	15		
Paraprofessional-to-Student Ratio	Mean	0.1	1.4	2.4	1.1	160.03	10.068**
	S.D.	0.5	4.4	5.0	1.6		
	N	105	57	77	15		
				Pooled Grades and Subjects			
Number of Students Present	Mean	18.1	7.2	20.4	15.8	10,847.30	272.518**
	S.D.	7.6	1.5	5.9	6.1		
	N	542	310	315	58		
Paid Staff-to-Student Ratio	Mean	4.3	13.9	5.7	5.9	5,968.62	260.914**
	S.D.	1.9	7.1	3.3	1.9		
	N	542	308	315	58		
Total Staff-to-Student Ratio	Mean	4.9	14.1	6.0	5.9	5,970.94	236.30**
	S.D.	4.0	7.5	3.9	1.9		
	N	542	310	315	58		
Paraprofessional-to-Student Ratio	Mean	0.0	4.3	2.1	1.9	1,190.04	94.578**
	S.D.	0.5	6.2	3.1	2.4		
	N	542	308	315	58		

*The four characteristics, in order, are defined as: Average number of students observed in on-task scans; paid staff minutes per pupil per hour; paid and unpaid staff minutes per pupil per hour, and paraprofessional minutes per pupil per hour.

**F ratio significant beyond the .001 level.

For the total staff-to-student ratio, the mean was 4.9, as compared with the Pullout mean of 14.1.

We conclude that overwhelmingly, Pullout OIGs show the largest staffing ratios and have fewer students. For staff-to-student ratios, the other two special service settings, In-Class and Self-Contained, also show means greater than that for the Regular setting, although the differences are much less pronounced. Compensatory and other special services, then, are characterized by higher staff-to-student ratios. It should also be pointed out that what small differences there are between the paid staff and total staff ratios are probably largely due to student teachers. Parent volunteers were almost never seen in classrooms. The higher staff-to-student ratios are likely the major factor associated with Pullout setting differences in off-task behavior and classroom atmosphere, described below.

On-Task Behavior. During observations of each OIG, observers scanned the room every five minutes and tallied the number of students present and the number of students judged to be engaged in the subject matter. These tallies were later converted to a final measure of on-task behavior, the average number of students on-task across all scans for the OIG.

Observers were also asked to estimate the percent of students who were off-task 25 percent or more of the lesson time, and to make judgments about the sources of off-task behavior by estimating the percent of total off-task behavior attributable to sources such as distractions from another student, lack of task assignments or unclear directions, or external interruptions. These estimates were to sum to 100 percent. The reader should note that these measures were to be expressed as percentages of total off-task behavior, and that in some cases, there was very little off-task behavior to be apportioned among these categories. A high percentage on one of the sources of off-task behavior, then, does not imply that there was a large amount of off-task behavior.

Table 4-2 summarizes the ANOVAS for percent of students on-task and for sources of off-task behavior for the four settings. In all analyses for percent of students on-task, the setting effect is significant, and the Pullout setting shows a substantially higher mean than any of the remaining three settings. The rank order of the means for In-Class, Self-Contained, and Regular groups is not completely stable across all four analysis cells, but in three of the four cells we may note that the In-Class setting shows the lowest mean for percent of students on-task. In a pooled analysis over OIGs in both grades and subjects, the Pullout setting shows a mean of 85 percent, followed by the means for the Regular (79 %), Self-Contained Classroom (78 %), and In-Class (75 %) settings.

The results for the analyses on percentage of students off-task 25 percent or more of the lesson time are, in effect, similar. In the pooled analysis, we see that an average of 9 percent of the students were estimated to be off-task for over a fourth of the lesson in Pullout OIGs, as compared with 15 percent for Regular, 18 percent for Self-Contained Classroom, and 22 percent for In-Class OIGs.

The results regarding sources of off-task behavior are much less consistent. However, in three of the four grade-subject cells and in the pooled analysis, Pullout groups showed the highest percentages of off-task behavior attributable to handling equipment and materials. This finding is consistent with the relatively greater availability and use of special equipment and materials in Pullout labs. Also, in three cell-level analyses and in the pooled analysis, Self-Contained groups were associated with the highest and Pullout groups with

Table 4-2

On-Task Behavior Variables in Instructional Groups in Four Settings

On-Task Variable	Instructional Setting	Grade 2 Reading			Grade 2 Math			Grade 5 Reading			Grade 5 Math			Pooled Grade and Subject		
		Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
Percent of Students On-Task	Regular	79	14	188	77	16	121	83	13	127	80	11	105	79	14	542
	Pullout	85	10	128	83	13	40	84	11	35	85	12	57	85	11	310
	In-Class	76	14	93	71	15	62	76	14	83	74	15	77	75	15	315
	Self-Contained	75	10	14	77	15	14	81	12	15	80	12	15	78	12	58
Mean Square Between		1,882.64			1,142.54			1,041.21			1,052.64			5,163.41		
F Between Groups		11.370*			5.010*			6.727*			3.702*			19.648*		
Percent of Students Off-Task 25% or More of Lesson Time	Regular	17	21	188	18	20	121	11	16	127	15	18	105	15	19	542
	Pullout	8	13	128	12	16	40	3	15	35	10	16	57	9	14	310
	In-Class	19	21	93	25	23	62	22	20	83	22	22	77	22	22	315
	Self-Contained	26	20	14	18	19	14	10	10	15	17	21	15	18	18	58
Mean Square Between		3,488.46			1,327.55			3,148.97			1,429.79			8,463.81		
F Between Groups		9.738*			3.248*			11.165*			3.915*			24.024*		
Percent of Total Off-Task Behavior Attributed to:																
Distractions From Another Student	Regular	33	17	185	28	18	118	30	22	126	32	13	105	28	18	535
	Pullout	19	20	127	21	20	37	25	24	81	33	24	53	21	22	298
	In-Class	27	17	93	31	18	62	29	18	12	32	16	77	30	17	314
	Self-Contained	31	12	14	35	13	14	34	21	15	36	19	15	34	17	58
Mean Square Between		1,808.88			1,012.02			710.60			1,228.19			4,890.79		
F Between Groups		3.110*			[illegible]			1.511			3.903*			10.716*		
Teacher-Initiated Distractions	Regular	7	10	185	7	11	118	7	12	126	7	10	105	7	11	535
	Pullout	4	8	127	7	10	37	7	11	81	2	4	53	5	10	298
	In-Class	5	8	93	6	10	62	7	10	12	7	10	77	6	9	314
	Self-Contained	9	6	14	3	3	14	9	11	15	9	11	15	8	9	58
Mean Square Between		359.24			52.60			16.42			402.25			386.21		
F Between Groups		4.540*			0.828			0.126			4.122*			3.814*		
Self-Initiated Distractions	Regular	47	24	185	44	23	118	43	24	126	44	18	105	45	23	535
	Pullout	46	28	127	50	29	37	42	25	81	44	31	53	45	28	298
	In-Class	47	24	93	39	20	62	44	19	12	39	20	77	43	21	314
	Self-Contained	43	14	14	47	20	14	38	12	15	33	19	15	40	17	58
Mean Square Between		141.78			967.49			185.23			863.70			703.01		
F Between Groups		0.232			1.785			0.259			1.737			1.280		
Lack of Assignments or Unclear Directions	Regular	8	12	185	10	12	118	8	14	126	7	10	105	8	12	535
	Pullout	9	17	127	9	13	37	8	14	81	6	12	53	8	15	298
	In-Class	12	16	93	15	11	62	8	12	12	10	12	77	11	15	314
	Self-Contained	9	11	14	6	11	14	6	9	15	9	11	15	8	11	58
Mean Square Between		184.01			608.75			16.53			140.82			523.65		
F Between Groups		1.317			3.704*			0.092			1.273			3.031*		
External Interruptions	Regular	5	11	185	3	11	118	6	11	126	3	7	105	4	11	535
	Pullout	5	10	127	3	14	37	7	14	81	9	18	53	6	13	298
	In-Class	4	7	93	4	6	62	5	7	12	5	7	77	4	7	314
	Self-Contained	4	4	14	7	18	14	7	7	15	5	3	15	6	9	58
Mean Square Between		92.88			82.20			57.64			205.90			142.79		
F Between Groups		0.928			0.646			0.492			1.753			1.265		
Handling Equipment or Materials	Regular	7	13	185	5	13	118	5	11	126	4	5	105	5	12	535
	Pullout	15	24	127	9	17	37	11	20	81	12	25	53	13	22	298
	In-Class	4	6	93	4	6	62	7	11	12	6	8	77	5	8	314
	Self-Contained	4	7	14	2	3	14	3	8	15	7	10	15	5	8	58
Mean Square Between		2,780.79			264.97			610.48			837.45			4,098.11		
F Between Groups		10.477*			1.886			3.208*			4.579*			19.912*		
Changing Activities	Regular	0.5	4.5	185	0.5	3.3	118	0.8	4.6	126	0.3	3.5	105	0.5	4.1	535
	Pullout	3.2	14.3	127	0.0	0.0	37	0.6	3.4	81	3.2	15.5	53	2.1	11.6	298
	In-Class	1.0	5.2	93	0.6	2.9	62	0.0	0.0	12	1.4	10.5	77	0.8	6.0	314
	Self-Contained	0.0	0.0	14	0.0	0.0	14	0.0	0.0	15	0.0	0.0	15	0.0	0.0	58
Mean Square Between		205.78			3.93			11.25			106.31			186.27		
F Between Groups		2.676*			0.507			0.940			1.137			3.730*		
Other Sources	Regular	0.3	2.2	185										1.0	1.3	535
	Pullout	0.2	1.4	127										0.1	0.9	298
	In-Class	0.0	0.0	93										0.0	0.0	314
	Self-Contained	0.0	0.0	14										0.0	0.0	58
Mean Square Between		1.87												0.72		
F Between Groups		0.665												0.736		

*F ratio significant at the .05 level.

the lowest percentages of off-task behavior associated with distractions from other students. In the pooled analyses, these figures were 34 percent for Self-Contained and 21 percent for Pullout groups.

The picture that emerges is that students in Pullout instructional groups are on-task more than students in any other settings. What off-task behavior there is tends to be primarily self-initiated, solitary behavior (e.g., day-dreaming, doodling) as in other settings. There is a smaller portion of the off-task behavior in Pullout OIGs, however, associated with students bothering other students, teacher-initiated distractions, and lack of task assignments, and a greater portion associated with handling equipment and materials and changing activities.

A final measure to be discussed here is the number of external interruptions per hour. All available Classroom Qualitative Summaries were read and a count of the number of external interruptions to the classroom during the observation period was made based on the narrative account. The total number of interruptions was then indexed to a rate per hour based on the total number of minutes the OIG was observed, and the figures were averaged over both observations where two observations were available. It should be stressed that these figures represent *external* interruptions from events outside the teacher's immediate control, and that they are conservative. We have no illusion that our observers, diligent as they were in their narrative accounts, reported all external interruptions. Also, in cases of summary statements such as, "The class was interrupted over and over again by hallway noise," a conservative estimate of the number of interruptions was used for the count. "Over and over again," for example, would have been counted as 3. Table 4-3 summarizes the ANOVAS for the number of external interruptions.

Table 4-3

External Interruptions in Instructional Groups in Four Settings

External Interruptions	Instructional Setting				Mean Square Between	Between Groups
	Regular	Pullout	In-Class	Self-Contained Classroom		
				Grade 2 Reading		
Mean	1.0	1.0	0.8	1.2	1.27	0.784
S.D.	1.3	1.4	1.0	0.9		
N	188	127	93	14		
				Grade 2 Math		
Mean	0.8	0.9	1.0	0.8	0.56	0.384
S.D.	1.2	1.4	1.2	1.1		
N	121	40	62	14		
				Grade 5 Reading		
Mean	1.2	1.8	2.2	1.3	7.94	2.817*
S.D.	1.5	2.2	1.4	1.2		
N	126	84	83	15		
				Grade 5 Math		
Mean	1.0	1.9	1.4	1.0	9.76	3.753*
S.D.	1.3	2.0	1.7	1.1		
N	105	57	77	15		

*F ratio is significant beyond the .05 level.

Significant effects for setting were found in grade 5 reading and math and the pooled analysis on the number of external interruptions per hour. The Pullout setting showed the greatest number of interruptions, with an average of 1.4 per hour in the pooled analysis. This result probably reflects the facts that some Pullout OIGs were conducted in less than optimal surroundings such as hallway areas, and that it was not unusual for some of the Pullout students to arrive after the class had started.

Teacher Time Allocations. A major activity during the observation of each OIG was to estimate the number of seconds spent by the teacher in behavioral management, instructional management, and off-task behavior. The number of seconds spent in instruction was calculated by subtracting the total seconds in these three activities and the estimated time spent by the observer making on-task scans from the total number of seconds in the lesson. These time estimates were then converted to the percentage of time spent at each activity. Definitions of these four teacher time allocation categories are:

- *Instruction:* conveying material to be learned through explanations, questions, or by monitoring student understanding.
- *Instructional Management:* activities that manage the flow of instruction, such as giving assignments, handling materials and equipment, and checking and recording completed work.
- *Behavioral Management:* activities related to controlling behavior, such as administering discipline, setting classroom standards, and monitoring directed toward maintaining order rather than assessing understanding.
- *Off-Task:* activities with no apparent connection to instructional objectives, such as absence from the classroom, collection of lunch money, and personal conversations.

Table 4-4 summarizes the results of the analyses of variance. An overall, pooled set of analyses is not provided since the only point of consistency was the lower mean for the Pullout setting on percentage of time in behavioral management. Although the setting effect was significant and Pullout showed the lowest percentage of time in behavioral management in all four analyses, the order of the other three means was not consistent.

In only one of the four analyses for percentage of time in instruction was the effect for setting significant. For grade 2 math, the Self-Contained Classroom setting showed the highest average percent of lesson time spent in instruction, 83 percent, as compared with 80 percent for Pullout, 78 percent for Regular, and 74 percent for In-Class OIGs. Looking at all four analyses, however, there is no pattern or consistency to the rank order of the means on this variable.

Similarly, a setting effect for percent of time in instructional management was found for only one cell (grade 5 reading), and no overall pattern of results was evident. In the one significant analysis, the Regular setting showed the lowest (18 %) and Pullout the highest (24 %) mean for time spent in instructional management, perhaps reflecting the greater use of equipment and materials in Pullout settings.

For percentage of time off-task, no analyses showed significant setting effects, and no consistent order to the means was evident. For teacher time allocation, then, the only consistent finding is that teachers in the Pullout setting spend less of their time in behavioral management than teachers in other settings, although the mean percentage of time involved is quite small (less than 3 %) in all cases.

Table 4-4

Percentage of Teacher Time in Four Activity Categories for Instructional Groups in Four Settings

Teacher Activity		Instructional Setting				Mean Square Between	F Between Groups
		Regular	Pullout	In-Class	Self-Contained Classroom		
Grade 2 Reading							
Instruction	Mean	78	77	76	78		
	S.D.	13	16	12	8	120.47	0.659
Behavioral Management	Mean	3	1	3	3		
	S.D.	4	1	4	3	61.41	4.642*
Instructional Management	Mean	16	19	18	16		
	S.D.	10	12	10	7	242.55	2.079
Off-Task	Mean	4	3	3	3		
	S.D.	4	8	4	2	11.50	0.409
	N	188	123	93	14		
Grade 2 Math							
Instruction	Mean	78	80	74	83		
	S.D.	13	13	14	7	490.80	2.841*
Behavioral Management	Mean	3	1	3	2		
	S.D.	4	1	3	2	46.75	4.569*
Instructional Management	Mean	16	16	18	12		
	S.D.	10	11	11	5	175.69	1.684
Off-Task	Mean	3	3	4	3		
	S.D.	5	8	7	5	29.66	0.787
	N	121	40	62	14		
Grade 5 Reading							
Instruction	Mean	75	69	70	70		
	S.D.	15	19	17	20	781.80	2.663*
Behavioral Management	Mean	2	1	3	2		
	S.D.	3	2	2	1	31.52	5.508*
Instructional Management	Mean	18	24	23	20		
	S.D.	12	15	14	15	778.01	4.188*
Off-Task	Mean	5	5	5	8		
	S.D.	8	7	7	12	48.48	0.790
	N	127	85	83	15		
Grade 5 Math							
Instruction	Mean	72	73	74	64		
	S.D.	17	20	16	21	440.60	1.407
Behavioral Management	Mean	2	1	3	3		
	S.D.	3	2	3	2	23.90	3.127*
Instructional Management	Mean	20	20	18	25		
	S.D.	12	16	12	18	256.87	1.412
Off-Task	Mean	5	5	5	8		
	S.D.	9	8	8	12	30.71	0.404
	N	105	57	77	15		

*F ratio significant beyond the .05 level.

Classroom Atmosphere. At the conclusion of each observation, observers completed a series of six global ratings of the OIG: frequency of negative comments by the teacher, classroom tension versus harmony, quality of cognitive monitoring, quality of on-task monitoring, quality of organization of the activities, and amount of learning judged to take place during the lesson. (The rating of amount of learning taking place is included here as an atmosphere variable even though it could be argued that this is more appropriately an outcome measure.) A second series of ratings was completed by two staff members trained to a 90 percent criterion of agreement based on readings of the narrative Classroom Qualitative Summaries for each observed OIG. These independently completed ratings of overall student behavior, student response to procedural or behavioral directives, teacher politeness to students, efficiency of instruction, and teacher involvement in the learning event were found to be moderately to highly correlated with the ratings made by observers, as might have been expected.

As shown in Table 4-5, results are strikingly clear and consistent. With the exception of the teacher involvement scale, the Pullout mean for all classroom atmosphere variables is substantially different, in the presumed favorable direction, in all analyses, with less consistency in the order of the remaining three setting means. The Pullout difference therefore appears to be the heaviest contributor in this series of analyses showing significant setting effects.

Only one of the five analyses on the scale of teacher involvement showed a significant setting effect (grade 2 reading). In this analysis, the Pullout mean was highest, as was also the case in the non-significant analyses for grade 5 math and for the pooled OIGs. We believe the failure of the Pullout setting to show a general difference on this classroom atmosphere variable, too, results from the fact that *personal* involvement of the teacher is one of the components of the global rating. Many Pullout lab OIGs received relatively low ratings because audio-visual machines or other sources were carrying the burden of instruction while lab teachers monitored and only periodically interacted with the group or individuals.

Summary. Table 4-6 shows the ranking of the means for all variables for which two or more of the cell-level analyses or the pooled analysis showed a significant effect for settings. A rank of "1" always indicates the extreme in the most pedagogically favorable direction (e.g., most educators would agree that a high percentage of students on-task or a harmonious classroom atmosphere would be favored over a low on-task percentage or a tense classroom learning environment).

In 96 of the 120 analyses tabled, the Pullout setting has a rank of "1." Of the 24 analyses for which the Pullout mean was not top-ranked, 19 are analyses on sources of off-task behavior. In only 5 of the 90 analyses regarding staffing, level of student on-task behavior, teacher time allocation, and classroom atmosphere, does the Pullout setting fail to rank "1." While there is less consistency in the ordering of the other three means, we note that in 29 of 50 analyses on classroom atmosphere and in 8 of 10 analyses on levels of student on-task behavior, the In-Class setting shows the fourth, or presumed least-favorable, rank.

CLASSROOM PRACTICES IN THE DIFFERENT SETTINGS

A number of items for the SES Teacher Questionnaire provide information on classroom management and instructional practices. In order to make comparisons among the settings on these variables, SPHPS teachers were classified as being associated with Regular, Pullout, In-Class, or Self-Contained Classroom OIGs. The majority of teachers were linked

Table 4-5

Classroom Atmosphere Ratings for Instructional Groups in Four Settings

Atmosphere Variable*		Instructional Setting: Regular	Pullout	In-Class	Self-Contained Classroom	Mean Square Between	F Between Groups	Instructional Setting: Regular	Pullout	In-Class	Self-Contained Classroom	Mean Square Between	F Between Groups
		Grade 1 Reading						**Grade 1 Math**					
Teacher Takes Negative Comments	Mean	1.81	1.31	1.46	1.94	7.67	10.791**	1.13	1.15	1.71	1.36	5.03	5.775**
	S.D.	0.99	0.51	0.61	1.33			1.01	0.67	0.93	0.95		
Classroom Tension/Harmony	Mean	3.63	4.26	3.50	3.24	11.91	14.492**	3.57	4.10	3.32	3.58	3.14	3.598**
	S.D.	1.10	0.69	0.96	0.91			1.10	0.77	0.97	1.16		
Quality of Cognitive Monitoring	Mean	3.61	4.22	3.51	3.56	12.53	15.889**	3.48	4.07	3.03	3.86	4.18	4.271**
	S.D.	1.10	0.63	0.96	1.14			1.13	0.84	0.97	0.68		
Quality of On-Task Monitoring	Mean	3.43	4.16	3.12	3.27	18.09	21.273**	3.41	3.91	3.01	3.49	6.71	6.457**
	S.D.	1.17	0.66	0.91	0.94			1.10	0.88	0.99	0.75		
Quality of Organization of Activities	Mean	3.62	4.20	3.61	3.46	10.25	11.514**	3.56	4.00	3.14	3.76	5.10	5.142**
	S.D.	1.14	0.74	1.12	0.67			1.19	0.81	1.10	0.77		
Amount of Learning During Lesson	Mean	3.40	3.86	3.17	3.25	9.39	11.813**	3.17	3.75	3.06	3.54	4.11	4.402**
	S.D.	0.94	0.77	0.98	0.86			1.10	0.99	0.90	0.89		
Student Overall Behavior	Mean	3.66	4.21	3.67	3.71	8.61	10.108**	3.63	4.11	3.17	3.61	4.78	4.635**
	S.D.	1.13	0.62	1.06	1.07			1.06	0.82	1.04	0.96		
Student Response to Directions	Mean	3.65	4.25	3.72	3.79	9.65	11.471**	3.61	4.13	3.40	3.61	4.42	4.319**
	S.D.	1.11	0.60	1.04	1.03			1.06	0.85	1.04	0.92		
Teacher Politeness to Students	Mean	3.59	4.17	3.71	3.46	9.22	11.511**	3.55	4.13	3.32	3.57	3.84	4.142**
	S.D.	1.10	0.58	0.97	1.17			1.11	0.80	0.87	0.94		
Efficiency of Instructions	Mean	3.45	3.99	3.44	3.46	8.79	9.675**	3.29	3.80	3.10	3.25	3.27	3.163**
	S.D.	1.12	0.73	1.04	1.01			1.12	0.97	1.00	0.83		
Teacher Involvement in the Learning Event	Mean	3.48	3.77	3.06	3.57	3.01	3.845**	3.57	3.46	3.49	3.43	[illegible]	[illegible]
	S.D.	0.92	0.80	0.88	1.04			0.98	1.10	0.88	0.81		
	N	138	127	93	14			121	40	62	14		
		Grade 2 Reading						**Grade 2 Math**					
Teacher Takes Negative Comments	Mean	1.71	1.26	1.87	1.95	4.17	5.625**	1.35	1.47	1.73	1.94	1.92	3.427**
	S.D.	0.90	0.48	0.94	0.77			0.99	0.72	0.99	0.66		
Classroom Tension/Harmony	Mean	3.82	4.19	3.68	3.24	5.46	7.007**	3.51	4.10	3.71	3.13	3.95	4.984**
	S.D.	0.88	0.76	0.89	1.08			0.91	0.76	0.95	0.97		
Quality of Cognitive Monitoring	Mean	3.82	4.10	3.28	3.61	7.59	11.114**	3.06	4.19	3.03	3.45	11.32	13.155**
	S.D.	0.73	0.81	0.96	0.89			0.91	0.77	1.14	1.14		
Quality of On-Task Monitoring	Mean	3.35	3.90	3.16	3.53	7.77	9.322**	3.17	4.13	3.02	3.07	15.37	17.714**
	S.D.	0.85	0.80	1.06	1.10			0.90	0.79	1.03	1.18		
Quality of Organization of Activities	Mean	3.75	4.13	3.33	3.39	5.35	7.054**	3.40	4.19	3.42	3.87	8.61	10.409**
	S.D.	0.84	0.76	1.13	0.74			0.96	0.71	0.95	1.05		
Amount of Learning During Lesson	Mean	3.20	3.89	3.20	3.31	6.39	8.107**	3.13	3.84	3.09	3.20	7.27	8.633**
	S.D.	0.85	0.68	1.13	0.80			0.87	0.82	1.12	1.12		
Student Overall Behavior	Mean	3.80	3.99	3.46	3.60	4.16	4.573**	3.60	4.12	3.31	3.53	4.82	5.173**
	S.D.	0.97	0.81	1.01	1.20			0.97	0.83	1.23	1.18		
Student Response to Directions	Mean	3.84	3.99	3.49	3.60	3.89	4.179**	3.59	4.20	3.33	3.40	6.95	7.102**
	S.D.	0.97	0.83	1.13	1.22			1.10	1.10	1.16	1.22		
Teacher Politeness to Students	Mean	3.77	3.94	3.55	3.50	2.47	3.282**	3.50	4.19	3.36	3.23	7.47	8.161**
	S.D.	0.86	0.73	0.90	1.20			0.90	0.70	0.98	1.16		
Efficiency of Instructions	Mean	3.39	3.72	3.18	3.20	3.29	3.200**	3.33	3.97	3.21	3.23	7.44	7.772**
	S.D.	1.12	0.93	1.17	1.20			0.93	0.85	1.18	1.21		
Teacher Involvement in the Learning Event	Mean	3.57	3.36	3.22	3.33	1.07	1.348	3.43	3.48	3.14	3.07	0.84	0.825
	S.D.	0.87	0.69	1.14	1.16			0.86	0.57	1.04	1.06		
	N	120	64	93	15			115	37	77	15		
		Pooled Grades and Subjects											
Teacher Takes Negative Comments	Mean	1.36	1.20	1.64	1.92	20.79	26.268**						
	S.D.	0.98	0.57	0.92	0.93								
Classroom Tension/Harmony	Mean	3.63	4.18	3.70	3.27	23.80	28.978**						
	S.D.	0.96	0.74	0.95	0.97								
Quality of Cognitive Monitoring	Mean	3.53	4.16	3.35	3.61	38.74	47.022**						
	S.D.	0.95	0.74	0.99	0.91								
Quality of On-Task Monitoring	Mean	3.40	4.25	3.14	3.42	46.94	52.237**						
	S.D.	1.00	0.76	1.00	0.99								
Quality of Organization of Activities	Mean	3.59	4.16	3.47	3.72	29.09	33.422**						
	S.D.	0.99	0.75	1.11	0.81								
Amount of Learning During Lesson	Mean	3.35	3.89	3.20	3.35	28.64	33.716**						
	S.D.	0.93	0.84	0.99	0.88								
Student Overall Behavior	Mean	3.65	4.12	3.52	3.61	21.76	23.713**						
	S.D.	1.00	0.74	1.14	1.06								
Student Response to Directions	Mean	3.68	4.16	3.55	3.59	22.83	24.635**						
	S.D.	1.11	0.75	1.04	1.03								
Teacher Politeness to Students	Mean	3.61	4.10	3.59	3.44	20.74	25.627**						
	S.D.	0.96	0.68	0.93	1.10								
Efficiency of Instructions	Mean	3.42	3.89	3.29	3.29	22.08	22.402**						
	S.D.	1.12	0.85	1.15	1.03								
Teacher Involvement in the Learning Event	Mean	3.51	3.56	3.46	3.17	0.97	1.124						
	S.D.	0.91	0.89	0.97	1.07								
	N	542	310	315	58								

Note: Due to missing data, reported Ns vary by 1 in some of the grade/subject analyses and by 2 in the pooled analyses.
* All ratings other than "Teacher Making Negative Comments" were made on a 1-to-5 scale, with a score of 5 representing the favorable extreme.
** F ratio significant at the .05 level.

Table 4-6

Ranking of Means for Four Settings on Classroom Observation Variables*

Observation Variable	Grade 2 Reading	Grade 2 Math	Grade 5 Reading	Grade 5 Math	Pooled Grades & Subjects
	Rank	Rank	Rank	Rank	Rank
	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
Number of Students Present	P S R I	P S R I	P S R I	P S I R	P S R I
Paid Staff-to-Student Ratio	P I R S	P S I R	P I S R	P I S R	P S I R
Total Staff-to-Student Ratio	P I R S	P S I R	P I S R	P I S R	P I S R
Paraprofessional-to-Student Ratio	P I S R	P S I R	P I S R	P I S R	P I S R
Teacher Makes Negative Comments	P I R S	P I S R	P I R S	P I S R	P I R S
Classroom Tension - Harmony	P I R S	P S R I	P R I S	P I R S	P I R S
Quality of Cognitive Monitoring	P R S I	P S R I	P R S I	P S R I	P S R I
Quality of On-Task Monitoring	P R I S	P S R I	P R S I	P S R I	P S R I
Quality of Organization of Activities	P S R I	P S R I	P S R I	P S I R	P S R I
Amount of Learning During Lesson	P R I S	P S R I	P R S I	P S R I	P R S I
Student Overall Behavior	P S I R	P S R I	P R S I	P R S I	P R S I
Student Response to Directives	P S I R	P R S I	P R S I	P R I S	P R S I
Teacher Politeness to Students	P I R S	P S R I	P R I S	P I R S	P R I S
Efficiency of Instruction	P S R I	P R S I	P R I S	P R S I	P R I S
Percent of Time in Behavioral Management	P R I S	P S R I	P R S I	P R I S	P S R I
Percent of Time in Instructional Management	R S I P	S R P I	R S I P	I R P S	R S I P
Percent of Students On-Task	P R I S	P S R I	P R S I	P R S I	P R S I
Estimated Percent of Students Off-Task 25% or More of Lesson Time	P R I S	P S R I	P S R I	P R S I	P R S I
Percent of Total Off-Task Behavior Attributed to:					
Distractions from Another Student	P R I S	P R I S	P I R S	P R I S	P R I S
Teacher-Initiated Distractions	P I R S	S I P R	P R I S	P I R S	P I R S

*Entries are: P = Pullout, R = Regular, I = In-Class, and S = Self-Contained Classroom to only one OIG setting, but in about 20 cases, teachers were linked to two types. Where teachers were linked to both In-Class and Regular OIGs, they were classified as In-Class teachers. Any conflict involving linkages between Pullout OIGs and either Regular or In-Class services was resolved by classifying the teacher as a Pullout teacher. This latter conflict, for example, arose on a few occasions involving programs in which the compensatory teacher devoted most of the time to running a Pullout lab, but also spent one or two class periods a week in the Regular classroom. There were no classification conflicts involving teachers of Self-Contained Classrooms.

Table 4-7 shows the ANOVA results for the four grades and subjects. Because ANOVAs for setting effects on these Teacher Questionnaire variables showed much less consistency across grades and subjects than variables from the observations, a pooled set of analyses across grades and subjects is not reported.

Approach to Use of Rewards. In the Teacher Questionnaire, approaches to use of rewards were assessed by asking teachers to indicate whether "I try to offer recognition to students primarily when they achieve specific objectives. I use praise or other rewards mainly to help students acquire specific academic skills and social behaviors" (scored 0), or "I try to establish a warm, accepting climate for all students, giving them praise, affection, and other rewards no matter how well they achieve or, within limits, what they do" (scored 1). The reader should note that this question was not asked separately for the two subjects or grades, so for teachers who teach both subjects and/or both grades, the same response appears in multiple cells of the analysis, thus rendering the findings somewhat correlated. In none of the four ANOVAS on this variable was a significant effect for setting detected. This is probably so because type of reward behavior may vary in different situations, and neither may be universally more desirable.

Use of Disciplinary Techniques. In another item from the Teacher Questionnaire, teachers indicated how frequently they used each of five techniques to handle disruptive classroom behavior. Responses for each of the five techniques were on a 0 ("never") to 4 ("several times a week") scale. This question was also asked of teachers only once and not separately for reading, math, or different grades. For the first technique, isolation of the student within the classroom, all ANOVAS showed a significant effect for setting, except grade 5 math, which barely missed significance ($p = .0553$). The rank order of the means was identical across all four cells, showing teachers associated with Pullout OIGs with the least frequent use of the technique, followed by teachers associated with the Self-Contained Classroom, Regular, and In-Class settings.

The scale for disciplinary removal from the classroom represents a sum of teachers' responses regarding frequency of sending the student to an alternate room and of sending the student to "higher authority." The possible range of values is from 0 to 8. Only in grade 5 reading was a significant effect for setting detected, although there was consistency across the cells in that the Pullout mean was always lowest (indicating less frequent use of disciplinary removal). It is also noteworthy that all means were quite low, with the highest mean only 1.68 for the Regular setting in grade 5 math.

A third scale is the sum of responses regarding frequency of providing an alternative activity and changing a student's seat. Presumably, these techniques are applied to less severe behavior problems than the two previously discussed techniques. The possible range of responses is again 0 to 8. The ANOVAS produced significant F values for grade 2 reading and math, and non-significant values for both subjects in grade 5. The rank order of means is completely consistent across grades and subjects, however. Teachers in Self-Contained

Table 4-7

Classroom Management and Instructional Practices by Teachers in Four Settings

Teacher Practices	Instructional Setting												Mean Square Between	F Between Groups
	Regular			Cutoff			In-Class			Self-Contained Classroom				
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.		
[illegible]														
Approach to Use of Rewards	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Disciplinary														
Isolation within Classroom	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Removal from Classroom	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Provision of Alternate Activities/Seating	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Approach to Use of Daily Lesson Plans	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Use of Diagnostic Approach														
With Regular Achievers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
With Low Achievers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Frequency of Change in Sub-Group Composition	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Variability in														
Total Reading Activity Time	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Instructional Objectives	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sequence of Learning Activities	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Expected Rate of Progress	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Teaching Method	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Types of Materials Used	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Frequency of Provision of														
Letter or Number Grades	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Information on Particular Strengths	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Information on Particular Weaknesses	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Use of Identified Feedback Techniques	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]														
Approach to Use of Rewards	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Disciplinary														
Isolation within Classroom	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Removal from Classroom	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Provision of Alternate Activities/Seating	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Approach to Use of Daily Lesson Plans	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Use of Diagnostic Approach														
With Regular Achievers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
With Low Achievers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Frequency of Change in Sub-Group Composition	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Variability in														
Total Math Activity Time	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Instructional Objectives	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sequence of Learning Activities	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Expected Rate of Progress	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Teaching Method	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Types of Materials Used	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Frequency of Provision of														
Letter or Number Grades	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Information on Particular Strengths	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Information on Particular Weaknesses	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Use of Identified Feedback Techniques	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Teacher Practices	Instructional Setting												Mean Square Between	F Between Groups
	Regular			Cutoff			In-Class			Self-Contained Classroom				
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.		
[illegible]														
Approach to Use of Rewards	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Disciplinary														
Isolation within Classroom	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Removal from Classroom	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Provision of Alternate Activities/Seating	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Approach to Use of Daily Lesson Plans	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Use of Diagnostic Approach														
With Regular Achievers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
With Low Achievers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Frequency of Change in Sub-Group Composition	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Variability in														
Total Reading Activity Time	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Instructional Objectives	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sequence of Learning Activities	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Expected Rate of Progress	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Teaching Method	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Types of Materials Used	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Frequency of Provision of														
Letter or Number Grades	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Information on Particular Strengths	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Information on Particular Weaknesses	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Use of Identified Feedback Techniques	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]														
Approach to Use of Rewards	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Disciplinary														
Isolation within Classroom	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Removal from Classroom	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Provision of Alternate Activities/Seating	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Approach to Use of Daily Lesson Plans	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Use of Diagnostic Approach														
With Regular Achievers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
With Low Achievers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Frequency of Change in Sub-Group Composition	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Variability in														
Total Math Activity Time	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Instructional Objectives	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sequence of Learning Activities	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Expected Rate of Progress	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Teaching Method	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Types of Materials Used	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Frequency of Provision of														
Letter or Number Grades	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Information on Particular Strengths	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Information on Particular Weaknesses	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Use of Identified Feedback Techniques	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

*F ratio is significant beyond the .05 level

Classroom settings report the least frequent use of these techniques, followed by Pullout, Regular, and In-Class teachers. Given the favorable rankings of on-task behavior and harmonious atmosphere previously described for Pullout groups, discipline problems are probably less severe. Furthermore, smaller groups and higher teacher-to-student ratios could further eliminate the necessity for the two more extreme techniques and allow teachers to change a seat or provide another activity without greatly interrupting instruction or losing the attention of large numbers of students.

Use of Lesson Plans. Teachers' use of daily lesson plans, scaled according to degree of structure, was assessed by separate items for reading and math. Teachers were asked to indicate whether "I use detailed lesson plans that contain specific objectives and activities for each day's instruction" (scored 1), "I use lesson plans that provide broad objectives and categories of activities for each day's instruction" (scored 2), or "I find that letting students' interests and expressed needs dictate classroom activities is preferable to creating lesson plans in advance" (scored 3).

A significant effect for setting was detected only for grade 5 math. Teachers in the Self-Contained Classroom setting indicated heaviest reliance on detailed daily lesson plans, followed by Pullout teachers, Regular teachers, and In-Class teachers. There was also little consistency in the rank order of the means across grades and subjects. We speculate that teachers in high-technology labs may have been puzzled as to how to respond to the question, since in many cases daily objectives and activities are specified by a machine or a curriculum management system rather than by a daily lesson plan.

Use of Diagnostic Approaches. In separate items for reading and math, teachers were asked whether the content they teach is "based almost entirely on the approved curriculum as outlined by the textbook" (scored 1), or "based on some content from textbook-based curriculum and some content based on individual needs as determined by a preassessment" (scored 2), or "based almost entirely on individual needs as determined by a preassessment on a test which diagnoses specific skill deficiencies" (scored 3). Teachers answered separately for their regular- and low-achieving students, as appropriate.

In all four analysis cells the ANOVA for setting was statistically significant on responses for low-achieving students. Teachers in the Pullout setting consistently had the highest mean, indicating greater use of a diagnostic approach, with the rank order of the remaining three means varying across grades and subjects. Use of a diagnostic approach with regular achievers produced a significant result only in grade 2 math, where once again the Pullout mean was highest. The rank order of means was even more unstable in these analyses for regular achievers, and the Pullout mean was highest in only three cells, with the In-Class mean highest in grade 5 reading. As might be expected, many Pullout teachers responded only for low achievers, with Pullout teachers generally reporting greater emphasis on diagnostic approaches than teachers in other settings.

Changes of Subgroup Composition. Teachers were asked, separately for reading and math, "If your students are organized into subgroups . . ., how frequently does the composition of the subgroups change?" Responses were scored by assigning a number to each response to approximate the number of changes throughout the year:

Does not apply - excluded from these analyses
Weekly - scored 38
Every 2 or 3 weeks - scored 15
About once a month - scored 10
Several times a year - scored 4
Rarely - scored 1

Significant setting effects were found for all cells other than grade 2 reading, with the Pullout mean highest in all but that cell, and no consistent pattern to the means otherwise. Thus, among teachers who report subgrouping for instruction, Pullout teachers appear to regroup more frequently, with the highest mean being a 20 for Pullout, grade 5 math teachers.

Variability of Aspects of Instruction. Teachers were asked, separately for reading and math, "To what extent are the following aspects of your instruction basically the same for all or most of your students?" Six aspects of instruction were queried: total time spent in reading/math activities, instructional objectives, sequence of learning activities, expected rate of progress, teaching method, and types of instructional materials. For each area, the possible responses were, "basically the same for most students," scored 0, or, "tends to vary among students," scored 1.

No setting-related differences were found for variability of total time, instructional objectives, or expected rate of progress. A significant setting effect was found on variability of sequence of learning activities in grade 2 reading, where Pullout teachers reported more variability than teachers in the other three settings. The ranking of means in the other cells was inconsistent with respect to this finding. In general, however, there appeared to be no setting-related difference on variability of sequence of learning activities.

Variability of teaching method showed significant setting effects in all analyses except grade 5 reading. Although, in general, Pullout means tended to be higher, there was little consistency of order for the other three setting means. The overall higher mean of Pullout teachers on this variable undoubtedly reflects the fact that Pullout labs are typically stocked with more varied and extensive collections of equipment and materials than other types of classrooms.

Use of Various Feedback Techniques. In separate reading and math items, teachers were asked to indicate how frequently they provided students with a letter or number grade, information about particular strengths, and information about particular weaknesses. Responses and scorings (approximately the number of occurrences in a year) were:

Never - scored 0
Two or three times a semester - scored 2
About once a month - scored 5
About every two weeks - scored 10
About once a week - scored 20
Two or three times a week - scored 50
Daily - scored 90

In no analyses for these three variables or for a variable constructed by summing responses across the three variables was a signficant effect for setting detected.

Use of Subgrouping Practices. Teachers responded to separate items for reading and math to indicate the basis on which they usually selected students for instructional subgroups, if they formed such subgroups. Table 4-8 summarizes the responses.

Fourteen percent of Regular reading teachers and 13 percent of In-Class teachers say they do not subgroup, as compared with 17 percent of Self-Contained Classroom teachers and 51 percent of Pullout teachers. In all but the Pullout setting, a higher percentage of teachers report they do not subgroup in math (39 % for Regular, 45 % for Pullout, 23 % for In-Class, and 24 % for Self-Contained classroom teachers). As in reading, a disproportionate number of Pullout teachers say they do not form subgroups. Presumably, this reflects the fact that Pullout classes are already subgroups, tend to be very small, and/or utilize individualized, high-technology labs in which subgroup organization is inappropriate.

With the exception of Regular reading teachers (with 21 %), fairly low percentages of reading and math teachers in any setting report basing subgroup selection on achievement in a prior class or grade. Use of general aptitude tests, characteristics unrelated to reading/math, and student self-selection very rarely appear to be the basis for subgroup selection. In both subjects, proportionally more In-Class and Regular teachers than Pullout and Self-Contained classroom teachers report basing subgroup selection on their judgment of current overall reading achievement. Finally, while 20 percent or more of teachers in each setting and subject report use of mastery of specific reading objectives as the usual subgroup selection basis, we may note an unexpectedly high percentage of Self-Contained Classroom teachers giving this response (63 % in reading and 65 % in math).

Thus, setting differences in subgroup-selection practices seem fairly minor, but this may reflect a relationship between setting and subgrouping that obscures the incidence of the practices overall (e.g., Pullout groups are already subgroups). The main pattern emerging from the data appears to be that among teachers who subgroup, judgment of students' current overall achievement and mastery of specific objectives are the most frequently used bases for subgroup selection.

Table 4-9 summarizes the responses of teachers who subgroup regarding the types of subgroups they create. The six possible responses for teachers who subgroup were compressed into two categories. The compressed categories and the original response options subsumed as part of each are:

Category	Responses Included
Homogeneous subgroups formed.	Children in a single grade who are at about the same level, children in different grades who are at about the same level, and children in an ungraded class who are at about the same level.
Heterogeneous subgroups formed.	Children in a single grade who are at different levels, children in different grades who are at different levels, and children in ungraded classrooms who are at different levels.

Table 4-8

Percent of Teachers in Each Setting Using Each Factor as the Usual Basis for Instructional Subgroup Selection

Basis for Subgroup Selection	Reading Instructional Setting				Math Instructional Setting			
	Regular	Pullout	In-Class	Self-Contained Classroom	Regular	Pullout	In-Class	Self-Contained Classroom
Does not apply. I do not form subgroups	14	51	13	17	39	45	23	24
Reading achievement in a prior class or grade	21	5	9	9	4	2	3	8
General aptitude tests (e.g., IQ test)	1	2	4	0	1	5	2	0
My judgment of the student's current overall reading/math achievement	37	22	41	11	29	15	41	3
Characteristics unrelated to reading/math	0	0	0	0	1	0	0	0
Student self-selection	0	0	1	0	1	0	0	0
Mastery of specific reading/math objectives	28	20	32	63	25	33	31	65
Total number of teachers' responses	355	121	210	35	350	85	220	37

Table 4-9

Number and Percent of Teachers in Each Setting Who Form Homogeneous and Heterogeneous Subgroups*

Subgroups	Instructional Setting			
	Regular	Pullout	In-Class	Self-Contained Classroom
		Reading		
Homogeneous	209 67%	33 55%	132 72%	23 79%
Heterogeneous	101 33%	27 45%	51 28%	6 21%
		Math		
Homogeneous	126 60%	24 51%	105 65%	19 66%
Heterogeneous	85 40%	23 49%	56 35%	10 34%

*Teachers who do not form instructional subgroups in reading/math are excluded.

Among teachers who report they form subgroups, a higher percentage of Pullout teachers report forming heterogeneous subgroups than teachers in any other setting. Forty-five percent of reading and 49 percent of the math Pullout teachers who subgroup said they formed heterogeneous rather than homogeneous groups, as compared with figures of 33 percent and 40 percent of Regular teachers. Heterogeneous rather than homogeneous grouping in Pullout compensatory classes would seem to contradict conventional pedagogical wisdom as well as prevailing conceptions of how CE services are usually (or are supposed to be) delivered. It should be pointed out, however, that in high-technology, individualized classrooms, it should be less relevant whether children are homogeneous or heterogeneous in level. Finally, of course, what we (and most Regular teachers) think of as a homogeneous group may be perceived as heterogeneous by many Pullout teachers.

COORDINATION OF INSTRUCTION IN DIFFERENT SETTINGS

Data gathered on coordination of instruction were used to address in a limited way the issue of whether Pullout instruction tends to be less well-coordinated with Regular instruction than In-Class compensatory instruction. Because so many programs involve a combination of Pullout and In-Class services, it was appropriate to include in the comparisons a third classification for Mixed-Service programs. As outlined below, our investigation produced no evidence of strong setting-related differences in coordination between compensatory and regular instruction.

The basis for the measures of compensatory-regular coordination was primarily a series of questions in the teacher interview asking (separately for reading and math) how important are other teachers of their students in deciding the respondent's curriculum, how much the teacher knows about the instruction provided to his or her students in reading/math by other teachers, and the number of minutes per week the teacher spends conferring with these other teachers regarding students they both teach in the subject. Data from a coordination question on the Teacher Questionnaire were also used. In this question, teachers were asked to select one of a number of options that best described the relationship between the regular and the compensatory program in their schools. This item was not asked separately for reading and math.

For the assessment of compensatory-regular coordination, responses to the teacher interview items were averaged to the grade-subject level within each school for only:

- those regular teachers who said they had students in common with compensatory teachers,
- those regular teachers who said they had students in common with compensatory aides,
- those compensatory teachers who said they had students in common with regular teachers, and
- those compensatory aides who said they had students in common with regular teachers.

For the item of the Teacher Questionnaire, a grade-subject average was taken across all teachers who responded. Regular-compensatory coordination was not relevant in all schools, or even in all schools that received some compensatory services. That is, while in most compensatory programs students receive instruction from both regular and compensatory staff, that is not universally true. Among the exceptions are programs that involve only instructional equipment/materials and non-instructional support staff; self-contained types of compensatory classrooms in which the compensatory staff provides all of the reading and math instruction; and cases in which Pullout instruction completely replaces Regular instruction.

Schools (at the grade-subject level) were first classified in terms of two of the settings used for the delivery of compensatory instruction: Pullout and In-Class. Total Instructional Unit-level data on the percentage of total reading/math instructional time spent in Pullout and In-Class instructional settings were aggregated to the grade-subject level within each school. Schools were then classified as providing Pullout, In-Class, or Mixed Pullout and In-Class services, using the decision rule that any non-zero values constituted evidence of instruction in the setting. Notice that a property of this classification rule is that even in cases where a much higher percentage of instructional time appears in one setting than the other, so long as both values are non-zero, the school is classified as having a Mixed setting. Table 4-10 shows the resulting number of schools in each setting category. (Several of the schools also provide compensatory services in the Self-Contained Classroom setting in addition to the services considered here.)

Analyses of variance were performed on four separate measures of coordination aggregated to the grade-subject level for all relevant respondents in schools classified as providing Pullout, In-Class, or Mixed services. Table 4-11 summarizes the results. In only two of the 16 analyses were statistically significant effects found for setting. These involved different items and different grade-subjects, and the ranking of the means was inconsistent for the two items. It is concluded that there is no evidence of setting-related differences in compensatory-regular coordination of instruction.

Table 4-10

Number of Schools Classified by Settings
for Compensatory Instruction

Grade Subject	Number of Schools		
	Pullout	In-Class	Mixed
Grade 2			
Reading	17	4	19
Math	10	4	11
Grade 5			
Reading	12	6	17
Math	7	5	11

SETTING-RELATED DIFFERENCES AT THE TIU-LEVEL

Comparisons among settings for total time in instruction and curriculum overlap can be made more appropriately at the level of the Total Instructional Unit (TIU) than at that of the Observed Instructional Group. TIU-level comparisons should allow us to determine whether particular overall settings tend to produce more total time in instruction and more overlap between curriculum and posttest. As mentioned earlier (in Chapter 3), we found a total of eight combinations of the four settings. The sections below will present results of ANOVAS on the time and curriculum-overlap data for these setting combinations.

Differences in Total Instructional Time. The SPHPS data collection included an estimation of the number of minutes students were present for reading and math instruction between the fall and spring achievement tests. The initial time data, obtained on the Observed Instructional Groups (OIGs), were the teacher-reported number of minutes per week and the number of weeks each OIG met. After adjustments to those data to correct for apparent deviations between teacher-reported and observed lesson times, errors in the reported number of weeks the OIG was in session, whether reading only or reading and language arts were taught during the scheduled time blocks, underestimates of time due to independent seatwork time, student changes from teacher to teacher during the year, and student absences (all described in detail in Report 16), the data were converted to the TIU level.

Table 4-12 shows the estimated total yearly hours of instruction for TIUs in each of the eight setting combinations. Considerable variability is evident in the data, with estimates ranging from 42.4 hours (Pullout Only, grade 5 math) to 183.5 hours (Pullout, In-Class, and Regular, grade 5 reading).

The ANOVAS yielded a statistically significant F value in all grades and subjects, indicating mean differences associated with setting combinations. The proper interpretation of the results is unclear beyond noting that, in general, where Pullout or In-Class treatments occur in addition to Regular instruction, the estimated minutes of instruction tend to be higher.

Table 4-11

Compensatory-Regular Coordination for Three School-Level Settings

Coordination Variable		School-Level Setting			Mean Square Between	F Between Groups
		Pullout Only	In-Class Only	Mixed Pullout and In-Class		
		Grade 2 Reading				
Knowledge of other teachers' instruction	Mean	3.7	3.6	3.8	0.06	0.068
	S.D.	0.9	0.5	1.0		
	N	16	4	19		
Importance of other teachers in deciding curriculum	Mean	1.8	2.3	2.3	1.35	1.752
	S.D.	0.9	1.4	0.8		
	N	17	3	19		
Number of minutes per week in conference with other teachers	Mean	46.0	38.3	57.1	773.97	0.537
	S.D.	25.7	28.4	46.5		
	N	16	3	19		
Relationship between regular and compensatory programs	Mean	2.1	2.7	2.2	0.50	2.655
	S.D.	0.5	0.4	0.4		
	N	17	4	19		
		Grade 2 Math				
Knowledge of other teachers' instruction	Mean	3.1	3.3	3.6	0.63	0.436
	S.D.	1.0	2.1	1.1		
	N	10	3	11		
Importance of other teachers in deciding curriculum	Mean	1.6	1.7	2.2	1.32	2.104
	S.D.	0.8	1.2	0.9		
	N	10	3	11		
Number of minutes per week in conference with other teachers	Mean	22.5	15.0	28.1	181.17	0.415
	S.D.	22.7	21.2	19.1		
	N	10	2	11		
Relationship between regular and compensatory programs	Mean	2.1	2.8	2.3	0.60	2.477
	S.D.	0.5	0.4	0.5		
	N	10	3	11		
		Grade 5 Reading				
Knowledge of other teachers' instruction	Mean	3.0	4.7	3.5	4.09	3.81*
	S.D.	1.0	0.5	1.1		
	N	12	6	17		
Importance of other teachers in deciding curriculum	Mean	2.3	1.3	2.0	1.79	1.693
	S.D.	1.2	0.8	1.0		
	N	12	6	17		
Number of minutes per week in conference with other teachers	Mean	37.4	55.6	40.6	603.60	0.693
	S.D.	29.5	30.4	29.3		
	N	12	5	17		
Relationship between regular and compensatory programs	Mean	2.0	2.3	2.2	0.22	0.992
	S.D.	0.5	0.5	0.4		
	N	13	7	17		
		Grade 5 Math				
Knowledge of other teachers' instruction	Mean	3.0	4.2	3.7	2.20	1.893
	S.D.	0.3	1.1	1.3		
	N	7	5	11		
Importance of other teachers in deciding curriculum	Mean	2.0	1.1	2.2	2.11	4.282*
	S.D.	0.7	0.2	0.8		
	N	7	5	11		
Number of minutes per week in conference with other teachers	Mean	21.3	42.2	26.4	675.83	1.272
	S.D.	9.5	41.9	17.5		
	N	7	5	11		
Relationship between regular and compensatory programs	Mean	2.0	2.5	2.3	0.49	2.669
	S.D.	0.4	0.4	0.4		
	N	7	7	11		

*F ratio significant beyond the .05 level.

Table 4-12

Estimated Total Hours of Reading/Math Instruction for Instructional Units in Eight Setting Combinations

Setting Combinations		Grade 2		Grade 5	
		Reading	Math	Reading	Math
Regular Only	Mean	135.2	102.6	123.2	104.3
	S.D.	65.2	43.2	40.5	29.7
	N	183	140	130	102
Pullout Only	Mean	81.5	55.4	67.1	42.4
	S.D.	32.1	26.2	35.2	30.1
	N	9	6	10	7
In-Class Only	Mean	125.6	86.1	102.5	103.7
	S.D.	45.1	29.9	30.3	27.6
	N	91	62	84	82
Self-Contained	Mean	104.6	82.9	125.1	95.2
	S.D.	52.4	16.1	54.8	33.0
	N	18	16	19	20
Pullout and Regular	Mean	169.3	150.0	155.1	126.1
	S.D.	62.7	59.1	51.9	42.3
	N	202	47	111	67
In-Class and Regular	Mean	161.4	95.2	105.5	139.1
	S.D.	53.2	38.9	33.2	35.4
	N	36	6	21	21
Pullout and In-Class	Mean	163.3	86.4	119.8	119.4
	S.D.	55.7	35.4	33.2	52.0
	N	105	76	75	52
Pullout, In-Class, and Regular	Mean	181.9	107.5	183.5	124.9
	S.D.	52.0	37.0	67.0	39.0
	N	25	6	10	6
F Between Groups		12.3*	13.7*	18.2*	8.9*

*F ratio significant beyond the .001 level.

Given the prevalence of these patterns of compensatory service, this picture appears to be consistent with findings from the longitudinal study (Report 5) that compensatory-served students tend to receive more instruction in reading and math than do unserved students.

While the Pullout-Only setting is consistently associated with the least instructional time, two things should be considered in interpreting this finding. First, numbers of TIU cases classified as Pullout Only, as for several other classification groups, are quite small (9, 6, 10, and 7 for the four study cells), and therefore means may be unstable. Second, the Pullout Only means are so low as to be suspect in some cases. Assuming a 32-week compensatory instructional year, the means for Pullout Only in grade 2 and grade 5 math would translate into a total of about only 104 and 80 minutes of instruction per week. Also, to our best knowledge, there is only one school in which Pullout compensatory instruction generally replaced "Regular" instruction. This school would account for only a small portion of the TIUs classified as Pullout Only. We therefore recognize the possibility that some number of these cases represent student-to-OIG linkage data-gathering errors. That is, teachers may have failed to mention or observers may have failed to record additional OIGs for the small number of students represented in these TIUs.

SCHEDULE DEVIATIONS

SES Report 16 details the methods used to estimate the amount of time SPHPS students spent in reading and math over the course of the year, including a number of adjustments through which we attempted to fine-tune our original estimates. One correction made an adjustment based on differences between the scheduled and actual number of minutes of instruction that occurred when OIGs were observed. A brief qualitative perspective on the topic of schedule deviations is presented here both because it illustrates some of the situations that must be faced in obtaining valid time estimates, and also because our qualitative data suggest that Pullout groups are more subject to scheduling disruptions that shorten scheduled lesson periods than are non-Pullout groups receiving special services.

Shortened Lessons for Pullout OIGs. Classroom Qualitative Summaries were generally available for each of two observations of each OIG. A total of 570 such qualitative observations were available for Pullout OIGs. Of these, 86 (or 15%) reported lessons that were shorter in duration than the scheduled time for the lesson. In 25 cases observers were not explicit about the number of minutes by which the lesson ran short, but in 61 cases a specific number of minutes was given. For example, an observer might have stated that a class started 5 minutes late or ended 10 minutes early. Of these 61 cases, 30 (or 49%) ran short by 9 minutes or less, 24 (or 40%) ran short by 10 to 15 minutes, and 17 (11%) ran short by 16 or more minutes, with one of these running short by more than 25 minutes.

In considering the causes of the shortened lessons, we found that more than 61 percent of the 86 shortened Pullout OIG observations involved one of two situations. In 22 cases, either the CE specialist went to locate students when they had not appeared as scheduled, or the CE specialist routinely went to the regular classroom(s) to gather and escort the students to the lab, thereby cutting into the scheduled instructional time. In another 31 cases, children arrived late, unescorted, for a variety of reasons: the regular classroom teacher kept the students late or forgot to send them, the clock in the regular classroom was slow, regular classrooms were giving exams which ran overtime, recess was extended by the regular classroom teacher, or a substitute teacher in the regular classroom did not know the CE schedule.

The remaining 33 cases of shortened Pullout OIG observations were attributable to a variety of situations such as: the specialist was late in arriving, the last compensatory class was late in leaving, the school day was shortened, classes were dismissed early for teachers' meetings, lunch schedule was changed, or there was a special program in the auditorium. In some cases, no reason was given, but these examples give the flavor of circumstances that in many cases led to shortened lesson periods.

Shortened Lessons for In-Class and Self-Contained OIGs. Whereas 15 percent of the observations of Pullout OIGs were reported to run short, only 9 percent of the 718 observations of In-Class and Self-Contained OIGs were shortened. This finding might be predicted given the high percentage of shortened Pullout OIGs due to late arrivals. That is, non-Pullout classes have greater numbers of students in them, and it is therefore likely that a teacher would begin instruction without one or two latecomers. In small Pullout OIGs, one or two latecomers often constitute 25 percent or more of the class, and the teacher is more likely to await their arrival.

For 44 of 66 shortened In-Class and Self-Contained OIG observations, the observer specified the number of minutes by which the lesson was shortened. Twelve, or 27 percent, were short by nine minutes or less, and 21, or 48 percent, were short by 10 to 15 minutes. Twenty-five percent, more than double the comparable figure for Pullout OIGs, were short by 16 or more minutes, with four of these 25 minutes or more.

The reported causes for shortened lesson periods in these OIGs roughly group into five categories:

- In-Class activities such as dyeing Easter eggs and making Easter baskets, homeroom activities such as roll call or collecting money, having a previous lesson or period run overtime, or showing unrelated movies.
- Outside activities or events such as rehearsals, library visits, assemblies, field trips, bake sales, fire drills, or late buses.
- Schedule changes to accommodate standardized testing schedules, foul weather, or teachers' meetings or workshops.
- The teacher's being called away to conferences with other teachers, to parent conferences, or to the telephone.
- Miscellaneous events such as late arrival of the teacher at the school or misbehavior of the class.

Thus, we see that shortened lessons were reported for a smaller percentage of In-Class and Self-Contained than for Pullout OIG observations, and that the reported causes for the reduced lesson time tend to be different. In Pullout OIGs, lessons frequently seem to be shortened because of late arrival of the students, and some Pullout teachers were also found to have included the travel time in their instructional periods as reported on the Linkage and Scheduling Forms.

Lesson Cancellations. Unfortunately, we do not have good information on another class of schedule deviations: complete cancellation of the day's instruction by a teacher. We suspect that this happens fairly often in some schools and with particular teachers. However, this suspicion derives primarily from informal reports of observers regarding the difficulties they had in carrying out the required observation in some schools, and we do not feel that lesson cancellations were routinely reported in the qualitative accounts. Scattered accounts of lesson cancellations, attributable to various events such as teacher absence, art fairs, swimming classes, computer breakdowns, and pre-holiday activities, were encountered occasionally, nevertheless. Future studies should be alert to school or teacher differences in frequency of lesson cancellation as a source of "noise" in time estimation procedures, and may also wish to explore the question of whether regular teachers cancel lessons with more frequency than do compensatory teachers.

One additional consideration should be kept in mind when interpreting the results regarding instructional time. That is, the impact on achievement of differences in scheduled or allocated time in instruction is presumably influenced by both the quality and content of the instruction that takes place during the scheduled lesson times. As we have seen in previous sections, the environment in Pullout groups appears to be more conducive to learning than any other setting. In the section that follows, we will examine the dimension of content.

DIFFERENCES IN CURRICULUM OVERLAP

In recent years, educational researchers and evaluators have given increasing attention to the question of the appropriateness of tests used to assess pupil growth. The criterion-referenced testing movement can be seen as one expression of this concern, but not as a generally applicable solution. Flanders (1970), Rosenshine and Furst (1971), and others have focused on this problem as it relates to research on teaching effectiveness, and have pointed out the need to construct or select achievement tests that match as closely as possible the content likely to be covered during the period of interest to the study, and then to verify coverage of this content.

It is apparent that this type of criterion-test validity can probably be ensured in laboratory-type investigations or in field studies involving small, homogeneous collections of classrooms. However, for large-scale field studies involving diverse programs of instruction, the problems are magnified dramatically. Given practical limitations, as research moves away from short-term, closely controlled investigations to longer-term field studies in heterogeneous settings, emphasis must necessarily fall on treating student opportunity to learn the skills and knowledge being tested as a variable in its own right, rather than on selecting or constructing one or more tests tailored to the objectives or content of a number of programs with varying emphases.

For large field studies involving standardized achievement tests, we can easily imagine the variability that might be expected in curriculum overlap — the degree to which the content of instruction matches, or "overlaps" what is being tested. As Cooley (1978) has pointed out, such differences can obscure relationships between instructional practices and their direct results in achievement. For example, imagine a situation in which groups of students spend the same amount of time on reading and are equally attentive. One group, let us say, is exposed to exemplary teaching practices, and as a result, masters almost all skills it covers. In another group, teaching practices are poor and only about half of the skills covered are mastered by pupils. If the same skills were taught and tested for groups, the superiority of practices in the first group could be detected — students would be seen to have mastered many more of the skills taught. If, on the other hand, the test content matched very closely what the second group covered, and was almost irrelevant for the first group, then the second group, the group with poor practices and inefficient learning, would likely appear superior on the posttest results. This example illustrates the need to

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account for differences in test relevance in order to avoid obscuring relations between instruction and achievement or obscuring the overall meaning of the outcomes of many different tests.

A number of approaches have been employed in investigations of opportunity to learn as it relates to measured achievement. Several are mentioned here to illustrate the range of handling of the concept. Rosenshine (1968) employed a count of test-relevant words from transcriptions of 15-minute lessons, while Husen (1967) asked teachers to indicate whether "all or most," "some," or "few or none" of the students tested had had an opportunity to learn the material tested in each item. Kugle and Calkins (1976) approached the problem at the objective rather than at the item level, asking teachers to indicate whether each student had covered the objectives of interest. Other researchers (e.g., Bellack, Kleibard, Hyman, and Smith, 1966) used time spent on the topics tested as a measure of opportunity to learn. Similarly, in the Beginning Teacher Evaluation Study (Fisher et al., 1978), curriculum overlap was an integral part of the construct of Academic Learning Time.

In the NIE Instructional Dimensions Study (Brady et al., 1977; Cooley and Leinhardt, 1978; Poynor, 1978), as in the present study, time, student-on-task behavior, and curriculum overlap functioned as separately-measured components of an overall opportunity-to-learn construct. In the Instructional Dimensions Study, efforts to measure curriculum overlap were quite extensive. Both teacher estimates of overlap and independent estimates based on analysis of the curriculum materials used by students, were produced.

For the SPHPS Study, a measure of curriculum overlap was needed, obtainable within the limits of study resources and realistic with respect to respondent burden. Our objective was to provide, for each Total Instructional Unit (TIU), a measure of the degree to which material appearing on the posttest had been covered during the year by the teacher or teachers associated with the TIU.

During the week following posttesting in their schools, SPHPS teachers reviewed the CTBS subtests administered to their students and indicated, separately for their regular- and low-achieving students, whether 50 percent or more of the students had received at least minimal instruction relevant to each item. Written instructions for completing the overlap estimate emphasized our desire to find out what items had been *covered*, as opposed to what items teachers felt most students could *answer correctly*.

The teacher estimates of overlap provided separate, item-level judgments of test relevance for regular- and low-achieving students. Missing-data problems were resolved by imputing modal item-level responses taken across the pool of responses for the most comparable group of teachers in the school (e.g., regular 2nd grade math and reading teachers, or compensatory reading specialists serving only second graders). In the case of equal numbers of "yes" and "no" responses in the pool, the conservative "no" response was imputed.

The item-by-item data collected at the teacher level had to be converted to total reading and math test, TIU-level estimates of overlap. This required several programming steps. Students were first classified as either regular- or low-achieving, where "low-achieving" was defined as scoring at or below the 33rd percentile (SES norms) on the fall pretest. Next, the overlap estimates of all teachers associated with each student were jointly considered: if any teacher associated with the student reported a given item as being covered by regular- or low-achieving students, as appropriate, the student was credited with having received instruction relevant to that item. If teachers reported they had no students in one or the other achievement category and reported for only one, but some students associated with

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the teacher were classified as belonging to the other category, the existing teacher data for the "wrong" achievement category was nevertheless used for the students.

The resulting binary ("yes," "no") item-level, student-level data were next converted to a student-level overlap score, the percent of posttest items reported to have been covered by one or more teachers associated with the student in the given subject. Both subtest and total reading and math test overlap scores were produced. Finally, the student-level scores were aggregated to the TIU-level for use in analyses at that level. As detailed in Table 4-13, ANOVAS on the four grade-subjects showed statistically significant differences in curriculum overlap associated with TIU-level setting combinations in all but grade 2 math.

Once again, as for total time in instruction, the Pullout Only setting is consistently ranked at the low extreme of overlap. Again, this result may represent error in assigning students to OIGs, so that curriculum overlap estimates from a single teacher, instead of from both a Pullout and a Regular teacher, were associated with the OIG. Regular Only OIGs are fairly stable in rank, showing 3 ranks of 5 and 1 rank of 4 for the means, and there may be a weak tendency for TIUs associated with multiple teachers to have higher overlap estimates, as might be expected. There might appear to be an advantage associated with Pullout instruction at first glance, but this is clouded by the relatively high means for the In-Class and Regular combination, which tends to leave multiple teachers as the most viable explanation.

Although the overlap comparisons for the various setting combinations yield no other clearly interpretable result, a comparison of overlap scores for regular- versus low-achieving students (for whom teachers provided separate overlap estimates) seems unambiguous. As shown in Table 4-14, for all CTBS subtests in both grades, low achievers (students scoring at or below the 33rd percentile on the fall pretest) are reported to receive less instruction relevant to the test content.

The largest difference between overlap scores for regular and low achievers occurs for the Reading Comprehensive subtest in grade 2, in which regular achievers are estimated to have had relevant instruction for 26 percent more of the test items than had low achievers. One explanation of this rather extreme difference is that low-achieving second-graders may be still working to master decoding skills, and as a result teachers may introduce fewer comprehension skills with them than with regular achievers who are more advanced in their grasp of basic decoding skills. Although low achievers were also reported to cover substantially less material relevant to the tested vocabulary words (75% as opposed to 88% item coverage), the difference is much less pronounced than for the comprehension skills portion of the test. In the fifth-grade results, the larger difference between overlap scores for regular and low achievers on the two subtests disappears, although the regular achievers have significantly greater overlap on both subjects.

While overlap differences between regular and low achievers are still statistically significant for grade 5 math, they are much less pronounced and (as for grade 5 reading) are essentially parallel for the two subtests. Whether it is because low achievers have "caught up" in terms of mastery of basic math skills, because teachers have given up on low achievers and stopped teaching them different sets of skills, or for other reasons, exposure to curriculum relevant to posttest items is much more nearly equal for regular and low achievers in grade 5 math than in any other cell.

We believe that these findings have direct bearing on the test-content concerns with functional-level testing. That is, although low-achieving students may be tested with at-level

Table 4-13

Curriculum Overlap (Percent of Items Tested for Which Relevant Instruction Was Received) for TIUs in Eight Setting Combinations

Setting Combinations		Grade 2		Grade 5	
		Reading	Math	Reading	Math
Regular Only	Mean	83	79	85	85
	S.D.	19	18	16	13
	N	183	140	130	102
Pullout Only	Mean	66	72	74	77
	S.D.	23	21	24	16
	N	9	6	8	5
In-Class Only	Mean	81	79	71	80
	S.D.	20	19	23	17
	N	91	62	84	82
Self-Contained	Mean	72	75	85	89
	S.D.	28	18	21	16
	N	18	16	19	20
Pullout and Regular	Mean	87	83	84	85
	S.D.	15	14	15	12
	N	202	47	111	67
In-Class and Regular	Mean	83	89	90	96
	S.D.	19	10	15	8
	N	36	6	21	21
Pullout and In-Class	Mean	88	85	86	84
	S.D.	12	15	16	11
	N	105	76	75	52
Pullout, In-Class, and Regular	Mean	92	73	91	88
	S.D.	14	10	7	6
	N	25	6	10	6
Mean Square Between		1,528.91	499.29	2,347.34	598.87
F Between Groups		5.256*	1.690	7.650*	3.228*

*F ratio significant beyond the .005 level.

Table 4-14

Mean Student-Level Percent Overlap for Regular- and Low-Achieving Students

CTBS Subtest		Student-Achievement Classification		Mean Square Between	F Between Groups
		Low-Achievers	Regular-Achievers		
			Grade 2 Reading		
Reading Vocabulary	Mean	75	88	147,697.51	369.949*
	S.D.	25	15		
Reading Comprehension	Mean	69	95	640,655.03	874.058*
	S.D.	37	12		
			Grade 2 Math		
Mathematics Concepts	Mean	80	91	100,173.19	321.379*
	S.D.	23	13		
Mathematics Computation	Mean	65	83	280,249.48	571.327*
	S.D.	26	18		
			Grade 5 Reading		
Reading Vocabulary	Mean	72	86	127,308.54	252.644*
	S.D.	26	17		
Reading Comprehension	Mean	78	93	177,011.63	362.854*
	S.D.	28	11		
			Grade 5 Math		
Mathematics Concepts	Mean	75	82	41,674.21	131.634*
	S.D.	19	16		
Mathematics Computation	Mean	86	91	24,285.92	123.489*
	S.D.	17	11		

*F ratio significant beyond the .0001 level.

or even below-level tests, the content of their remedial instruction may be even lower-level. For this study, most low-achieving students were tested with a test one level below the publisher-recommended level for students at that grade. Apparently even this was not enough in some cases to ensure high levels of overlap.

CONCLUSION

Several themes emerge from the findings in a comparison of settings and instructional practices. Of the four instructional settings, Pullout groups revealed a higher percentage of on-task behavior, less need for behavioral management, and a more harmonious classroom atmosphere, as well as a greater use of the diagnostic-prescriptive approach resulting in more individualization and variability of instruction. Together these characteristics would seem to indicate what is commonly believed to be a superior learning environment. It seems reasonable to suppose that these characteristics are due, in large part, to a higher staff-to-student ratio and smaller group size in Pullout groups. Our findings seem to temper some of the harsh criticism of Pullout instruction discussed in Chapter 3, and they offer some additional factors for consideration.

While Pullout-Only groups were associated with the least amount of instructional time, few TIUs were classified as Pullout-Only, and most students receiving Pullout instruction received other instruction as well. More shortened lessons were found in Pullout groups frequently due to late arrivals or teachers calling for students. It should be kept in mind that initial reports from specialists on scheduled instruction time may have included the time involved in calling for students. Again, we wish to emphasize that the quality of instruction is probably of more importance than the length of time involved.

Turning to curriculum overlap, not surprisingly, low achievers received less instruction relevant to the test content than did regular achievers. It should be noted, however, that maximizing overlap of test items with instruction may not always be a desirable goal. Where program objectives are clearly specified or societal goals are to be met, the measurement of outcomes should not be dictated by characteristics of the program's implementation.

CHAPTER 5.
ATTITUDES TOWARD COMPENSATORY EDUCATION

Principals' opinions of the effects and the effectiveness of compensatory programs in their schools were assessed during in-depth interviews. The results indicate that, in general, principals are well satisfied with the effectiveness of their programs in terms of impact on reading and math achievement. They also generally perceive the programs to have beneficial effects on participating students in areas other than reading and math achievement (such as self-esteem and improvement in other subjects), and they perceive the programs to have beneficial spin-off effects on non-participants, as well.

Materials from the thousands of pages of qualitative narrative protocols were drawn together to provide supplemental, anecdotal information pertaining to teacher and student attitudes toward compensatory programs and program settings. In general, the reports indicate favorable attitudes for students. While a mix of positive and negative attitudes of teachers was reflected, most comments were complaints or statements of particular problems that they experienced with the programs. The majority of complaints by both regular and CE staff involved situations that could be improved by their increased understanding of program guidelines and intents, better internal communication, and administrative monitoring in selected problem areas.

Because principals have a unique perspective on the operation of compensatory programs and have the potential to influence the acceptance and operation of the programs in their schools, a number of questions in the Principal Interview were used to assess their views about the effectiveness of their compensatory programs in terms of improving reading and math skills, effects on participants in areas other than program subject-matter skills, and effects on non-participating students.

As qualitative narrative reports were read, excerpts thought to reflect teacher or student attitudes toward compensatory programs were compiled and summarized. We caution the reader against interpreting the proportion of positive versus negative comments reported here as an estimate of the population proportions for these attitudes. The point of presenting a summary of this type is not only to reflect attitudes, but also to identify some underlying problems that may create poor attitudes and for which there may be solutions. Some of the excerpts, on the other hand, are highly positive and express the feelings of those who are very satisfied with the programs.

We would also like to alert the reader in advance to the relative *dearth* of comments expressing either the opinion that CE students or pullout students are stigmatized, or suggesting specific ways in which stigmatization may occur. We feel this constitutes "negative evidence" of a sort, indicating that labeling and stigmatization may not be as much of a problem as some have suggested.

EFFECTIVENESS OF COMPENSATORY PROGRAMS

Principals were asked to rate the effectiveness of compensatory reading and math programs at their schools in terms of effectiveness in improving the reading and math skills of participating students. In each case, the rating was made on a scale of 1 to 5, where 1 indicated "not effective" and 5 indicated "very effective."

In general, as indicated in Table 5-1, principals are fairly satisfied that their programs were improving the relevant subject-matter skills of participating students. The mean rating for the 48 reading programs was 3.9, and for math, 4.0.

Table 5-1

Principals' Ratings of the Effectiveness of Compensatory Programs

Response	Reading		Math	
	Number giving the response	Percent of applicable responses	Number giving the response	Percent of applicable responses
1 Not effective	0	0.0	0	0.0
2	2	4.2	2	5.4
3	14	29.2	9	24.3
4	19	39.6	14	37.8
5 Very effective	13	27.1	12	32.4
Mean	3.9		4.0	
S.D.	0.9		0.9	
Total applicable responses	48	100.1%	37	99.9%
Not-applicable responses (no program in this subject)	7		18	

Three principals accounted for the two lowest ratings for reading and math. The principal who rated both reading and math programs low in effectiveness had extremely minimal Title I reading and math services in his school. One resource aide was in charge of ordering and dispensing Title I-funded equipment and materials, which were made available to all classrooms in the school. During the SPHPS study year, $1,200 was available for purchase of new equipment and materials, and minimal inservice was provided by District Title I staff regarding their use. The only direct instructional intervention was provided by the resource aide, who occasionally tutored students (5 or 6 a week) in her resource room. This was done "on her own." It was not part of her formal duties, and she had no formal training. It seemed to us that such a minimal "program," if indeed the term can really be said to apply, could hardly be expected to produce much of an impact on achievement.

While more intensive, the second math program that rated low in effectiveness was also rather modest. In-class aides assisted as directed by the classroom teachers in the regular classrooms. There was also a pullout learning center staffed by a non-certificated aide.

Approximately 100 first- through sixth-grade students were served during the day, with some coming regularly and others coming on an as-needed basis. The numbers varied from day to day depending on the regular classroom teacher's judgment regarding the needs of the students, and his or her plans for the day's work in the regular classroom. When students were sent to the learning center, they brought with them a profile sheet from the diagnostic-prescriptive system used in the regular classroom, indicating areas in which the aide should provide assistance. In many cases, the regular classroom teachers also indicated which materials should be used.

The second reading program rated low in effectiveness was similarly modest in intensity and seemed to suffer from tensions among the staff. A compensatory reading teacher served approximately 40 second-through-fifth graders in a pullout setting. Her function was to supplement the regular classroom teachers' lesson plans working with small groups of three to five students for one-half hour, three days out of every six, on skill weaknesses indicated by the regular teachers. During interviews, several of the classroom teachers expressed negative feelings about the reading teacher. They felt they did not receive sufficient feedback on what their students were doing in her classes, and wondered about the effectiveness of the program. The reading teacher also assisted in a tracked remedial classroom three days of every six-day cycle. Finally, a part-time aide spent 40 minutes in each of four classrooms daily, assisting the classroom teacher as directed. During two six-week cycles each year, however, the aide left her regular classroom duties to supervise approximately 75 students daily in the use of six feedback teaching machines. Observers also reported that there seemed to be some tension between the reading teacher, who had been at the school for only three months, and the classroom aide.

The reading and math programs that rated lowest in effectiveness, then, seem to be less than model programs. On the basis of intensity alone, one might question whether they could be expected to have a substantial impact. At the other extreme, however, several programs rated as "very effective" by principals are similarly low in intensity, and others are very structured, intensive programs. The principals' ratings appear to be based on complex factors, and not on a single underlying dimension such as program scope or intensity.

OTHER EFFECTS ON PARTICIPANTS

Principals were also asked whether they thought their reading and/or math programs were affecting participating students in areas other than achievement in the two subjects. Interviewers were instructed to listen to responses and check all pre-specified response options that applied. Probing for each response was not done, since it was our intention to capture principals' spontaneous opinions without suggesting some with which they might agree or disagree.

Principal responses were first characterized by interviews in terms of whether beneficial effects, detrimental effects, neither, or both were mentioned. As shown in Table 5-2, principals overwhelmingly mentioned beneficial effects. As seen in the table, there was little mention of detrimental effects.

The summary in Table 5-3 captures responses of the 45 principals offering opinions about effects of their compensatory reading programs and the 34 principals offering opinions regarding their math programs. Most frequently mentioned was improvement in other subjects, particularly for reading. A number of these principals pointed out that reading is essential for progress in most or all other academic subjects and for successful day-to-day living. As one principal put it, "Success in reading is all-encompassing." Where specific

Table 5-2

Principals' Perceptions of Effects of CE Programs in Areas Other Than Reading/Math Achievement

	Number of Principal Responses of Each Type	
	Reading	Math
Principal feels program has no effects in areas other than achievement	1	7
Principal cites only beneficial effects in other areas	42	25
Principal cites only detrimental effects in other areas	1	1
Principal cites both beneficial and detrimental effects in other areas	1	1
Principal has no opinion	3	3
Not applicable; no program(s) in the school	7	18
Total	55	55

other subjects were mentioned in the course of the response, the more verbal academic areas tended to be mentioned more often: language arts, communication skills, and social studies. Science was most frequently mentioned as a subject area in which students improved as a result of participation in compensatory math programs.

Also noteworthy is the fact that about half of the principals with reading or math programs spontaneously mentioned improved self-concept or self-esteem as an effect of program participation. Similarly, 17 of the 45 principals citing effects for reading programs and 13 of the 34 principals citing effects for math programs attributed improvement in motivation or attitude to the programs. A substantial number (12 for reading and 11 for math programs) also mentioned improved personal or social adjustment as a beneficial program effect. Bearing in mind that most of the programs involved at least some pullout instruction, this would seem to indicate that most principals are not advocates of the position that compensatory instruction in general or pullout instruction in particular stigmatizes, although one principal did offer this view.

Rather surprisingly, there was little mention of reduced time in other subjects due to reading and math programs, and only one principal cited a reduction in regular math instructional time as a detrimental effect of the compensatory math program.

In summary, principals cited a wide range of beneficial effects of compensatory programs on participating students in areas other than subject-matter achievement. A tendency for

Table 5-3

Number of Principals Citing Various Types of Beneficial and Detrimental Effects of CE Programs in Areas Other Than Reading/Math Achievement

Effects	Number of principals citing effects of each type	
	Reading (N=45)*	Math (N=34)*
Beneficial Effects		
Improvement in other subjects	35	17
Improvement in self-concept or self-esteem	23	17
Improvement in motivation or attitutde	17	13
Improvement in social or personal adjustment	12	11
Improvement in inter-group relations	8	5
Cultural enrichment	7	5
Multiple teacher exposure	5	4
Improvement in logical thinking	0	2
Health	1	0
Detrimental Effects		
Reduced time in another academic subject	1	1
Stigmatization or reduction in self-esteem	1	1
Reduced time in regular math instruction	0	1

*Sums of responses do not add up to number of principals since principals may have cited more than one effect.

principals to perceive reading programs as having more spin-off effects than math programs is also evident in these figures. The types of beneficial effects cited included frequent mention of improvement in other subjects, self-concept or self-esteem, motivation or attitude, and social or personal adjustment. From four to eight principals in each subject also mentioned improvement in intergroup relations, cultural enrichment, improved behavior, and multiple teacher exposure as program benefits. Finally, two principals mentioned improved logical thinking skills as a beneficial effect of their math programs, and one mentioned improved health (operating through improved self-concept) as an effect of the reading program.

EFFECTS ON NON-PARTICIPANTS

To round out coverage of principals' perceptions of the effects of compensatory programs, interviewers asked the open-ended questions, "Do you think the compensatory reading/math program(s) is/are affecting non-participating students in any way?" Near-verbatim recording of responses permitted later content coding of replies by home office staff. After recording responses, however, interviewers in the field also classified the overall responses in terms of whether the principal felt there were no effects on non-participants, cited only beneficial effects, cited only detrimental effects, cited both beneficial and detrimental effects, or offered no opinion. Table 5-4 summarizes these results.

Table 5-4

Principals' Perceptions of Effects of CE Reading and Math Programs on Non-Participants

	Number of Principal Responses of Each Type	
	Reading	Math
Principal feels program has no effect on non-participants.	10	8
Principal cites only beneficial effects on non-participants.	30	21
Principal cites only detrimental effects on non-participants.	4	3
Principal cites both beneficial and detrimental effects on non-participants.	2	2
Principal has no opinion.	0	1
Not applicable; no program(s) in the school, or no non-participating students.	9	20
Total	55	55

Beneficial Effects. Once again, as for responses regarding spin-off effects on participating students, principals overwhelmingly cited positive rather than detrimental effects of compensatory programs. Thirty-two of 46 principals for whom the question was applicable in reading cited one or more positive effects on non-participants, while 23 of 35 cited one or more positive effects for math programs. Interviewers coded ten principals for reading and eight principals for math as believing the programs had no effects on non-participants. Six principals for reading and five for math were reported to cite one or more negative effects.

Table 5-5 displays the types of effects mentioned within the base samples of 36 principals for reading and 26 for math who cited one or more program effects on non-participants. The single most frequently mentioned positive effect, cited by eight principals for both reading and math, was that non-participants receive more individualized instruction, due to a reduced student-teacher ratio while served students are receiving compensatory instruction.

For math, seven principals and for reading, six principals indicated that non-participants benefit from use of materials and/or equipment provided by compensatory funds. This issue of "leakage" of Title I materials and/or services to ineligible students came up repeatedly in the qualitative narrative reports filed by observers. Some principals and Title I teachers were quite candid in saying materials or aides were used with ineligible students. Some felt it was "silly" or "wrong" to deny the materials or services to ineligibles, who they believed would profit from them, and seemed to have little concern regarding

Table 5-5

Number of Principals Citing Various Types of Beneficial and Detrimental Effects of CE Programs on Non-Participants

	Number of Principals Citing Effects of Each Type	
	Reading (N=36)	Math (N=26)
Beneficial Effects		
Non-participants receive more individualized instruction because the student-teacher ratio is reduced while served students are receiving compensatory instruction.	8	8
Non-participants have the use of materials and/or equipment provided by compensatory funds.	7	6
Non-participants receive instruction at a more appropriate level because the lower-achieving students have been brought closer to their level.	5	5
Non-participants receive instruction at a more appropriate level because at least some of their instruction is separate from that of lower-achieving students.	5	2
Non-participants' attitudes towards school or self have improved or matured.	6	5
Non-participants' attitudes towards other students have improved or matured.	3	2
Non-participants receive more expert instruction because their teachers have been exposed to compensatory programs, teachers, or in-service training.	4	4
Non-participants receive more expert instruction because their teachers are more qualified than the teachers or aides that the compensatory program assigns to participants.	2	1
Detrimental Effects		
Non-participants, many of whom are needy, do not receive the benefits of the compensatory program.	3	3
Non-participants are envious of compensatory-served students, or feel left out.	2	1
Non-participants are exposed to or participate in stigmatization of the identifiable compensatory-served students.	1	1

whether or not they were in violation of program guidelines. In some other schools, by contrast, there was expressed some fear of audit, and strict monitoring took place to ensure that no leakage occurred. In a few schools, the leakage issue was a bone of contention among staff members or between principals and staff. In one school, for example, the compensatory coordinator indicated that she was quite upset with the principal because he wanted to establish a policy of allowing equipment and materials to be used by regular teachers for all pupils, which she believed was a violation of guidelines.

For reading a total of ten principals and for math, seven principals indicated that non-participants were able to receive instruction at a more appropriate level as a result of the compensatory programs. Responses were split in terms of specifying the mechanism through which this occurred: five principals for reading and five for math attributed the effect to the fact that the lower-achieving, compensatory-served students had improved and been brought closer to the level of the non-participants, while for reading five principals and for math two felt the effect occurred because at least some of the compensatory instruction is separate from that received by non-participants.

Non-participants' attitudes toward school or self were said to have improved as a result of the compensatory programs for reading by six principals and for math by five. Similarly, for math three principals and for reading two believed non-participants' attitudes toward other students have improved or matured as a result of the compensatory programs in those subjects.

Finally, several principals felt that non-participants receive more expert or competently-taught instruction as a result of the programs. For reading and for math four principals each cited this effect as a result of non-participants' teachers being exposed to exemplary compensatory teachers or program practices, or to inservice training provided by compensatory programs. In two cases for reading and one case for math the causal agent named was quite different: that less-qualified teachers or aides are assigned to compensatory instructional positions.

Detrimental Effects. In the case of all but one principal, citations of detrimental effects of programs on non-participants centered on the fact that non-participants did not receive the compensatory services. One principal reporting on his reading program, and another reporting on his reading and math programs, elaborated this response, indicating that non-participants feel envious of served students, or feel left out. The other three principals, speaking for both their reading and math programs, simply commented to the effect that non-participants, many of whom were needy, did not receive the benefits of the compensatory program. The other principal who mentioned an effect coded as detrimental for both reading and math programs seemed rather tangentially concerned with the issue of stigmatization. He felt that there was a "certain amount of stigma attached to the identifiable Title I students" who, the response continues, are placed on the basis of CTBS scores with no judgment or input by teachers. Presumably, exposure to or participation in this process of stigmatization is damaging to both participants and non-participants. However, this principal did not mention stigmatization or any other detrimental effects on participating students in questions earlier in the interview. Curiosity about this response led to a check of qualitative materials for the school and its programs. In our judgment, compensatory programs and students in that school are much less separate and distinguishable than in most SPHPS schools. Also, that this was not a strongly-held belief and not a widely-shared belief in the school is evidenced by the fact that no other mention of stigmatization by the principal or other staff occurs in the qualitative reports from the school.

Our analysis of principals' interview responses regarding the effects of compensatory programs, then, indicates that most principals feel the programs have one or more effects on non-participants, and that almost all are beneficial. Benefits mentioned included more individualized instruction for non-participants by virtue of reduced pupil-teacher ratio while served students receive compensatory instruction, non-participants' use of equipment and materials, more appropriate instruction for non-participants, more expert or competently provided instruction for non-participants, and improved non-participants' attitudes toward school, self, or other students. Of the few principals citing detrimental effects, most reflected a positive evaluation of the compensatory programs. That is, non-participants suffered from not being able to receive the benefits of the compensatory programs.

STUDENT ATTITUDES TOWARD PULLOUT LABS

In reading the Classroom Qualitative Summaries only three statements reflecting unfavorably on pullout lab situations were discovered. In one instance — and one of the few instances which hinted at stigmatization — the observer reported that several students expressed resentment at having to come to the CE lab. The immediate stimulus for their comments was the fact that they had been forced to leave the regular classroom while a party was in progress. In the other two cases, students stated to the lab teachers that they were bored with the work they were assigned.

On the positive side, one observer described a situation in which children requested extra time in the lab that day for further work on their individual difficulties. Another described the eagerness of the children, and still another related that children applauded and cheered one another for specific achievements in the lab.

Some 13 expressions of positive attitudes toward pullout labs were compiled from school-level daily Topical Summaries for 12 different schools. The following are selected quotes from those protocols.

> According to the coordinator and some of the Title I teachers, some of the children find the program so enjoyable that they don't want to leave it, and the coordinator said that she overheard conversations where children had stated that they wanted to do poorly on a test because they didn't want to get out of the Title I program.
>
> Students seemed to enjoy coming to Title I reading and math so much that some of the regular teachers punished their students by not letting them go to Title I classes.
>
> Kids seem to enjoy themselves in the program. One group was observed to be reluctant to stop class and board buses for home.
>
> The compensatory education teacher reports that students really enjoy being in the "Special Reading Class." Other students come up to her and ask how to get in.

Also relevant to this topic are the observations of differences in performance and behavior of students in the regular and pullout classrooms. In the Classroom Qualitative Summaries, eight observers in seven different schools remarked that students observed with behavior or performance problems in regular classrooms did not show these same problems in compensatory classes. On the contrary, they were involved and on-task. Looking at the reverse situation, protocols for two regular classrooms included an explicit statement by the observer that the overall behavioral and on-task picture in the classroom improved markedly when the served students left for pullout lab.

TEACHER ATTITUDES TOWARD CE PROGRAMS

The dedication of pullout compensatory teachers and/or aides was described and noted on ten occasions in ten different schools by observers in school-level Topical Summaries and narrative descriptions of compensatory programs. This dedication was evidenced mainly by extra help given voluntarily to students before and after school and during lunch hours. Spending personal money to buy supplies and materials otherwise unobtainable, and spending extreme amounts of time preparing extra teacher-made materials were also mentioned as evidence of teacher dedication. Several teachers also reportedly made a special point of taking extra courses and inservice workshops in order to learn new approaches to help compensatory students.

An excerpt regarding one teacher observers found particularly dedicated to the students follows:

> One of the compensatory teachers has been noted for her dedication and enthusiasm. The reading teacher, who had retired and come back, said today, "I love these kids so." She also explained that she would make them cookies and bring them to school. She said that she was deeply rewarded that she could come back to this school and work in small groups. She said it made her feel good to see them work and progress. An example she shared of how she got involved with the students: There was one girl in one of the classes who didn't seem to be looking at things properly; through this teacher's interest she was able to get the student referred to an eye doctor. The student now has reading glasses, and during one of the observations today, the teacher kept making references to how much better she was reading now that she had her glasses.

Notably positive feelings toward the compensatory program or programs were reported for six regular classroom teachers in six different schools. They liked the programs and felt they were helpful. In contrast, however, 27 of the 325 regular classroom teachers (in 14 schools) made specific complaints involving a variety of aspects and particulars.

Four teachers (in two schools) mentioned problems with disruptions of the regular classroom associated with pulling students out for CE instruction. One of these was particularly distressed because scheduling was arranged such that she had to repeat for her pulled-out students the lesson material covered with regular students while the pullout instruction was taking place. Two teachers (in two schools) complained about use of standardized tests for determining who received CE services. One felt that teachers should have more of a say in the selection process, and the other felt that teacher-made test results should be used as input.

A variety of other specific complaints arose in another nine schools. One regular teacher complained that the Title I aide who was supposed to work with CE-eligible students in the classroom did not confine her attention to eligible students, which she believed to be a violation of program guidelines. Several teachers questioned the professional competence or working habits of CE staff. One such teacher refused to send her students who were identified to receive services to the resource room, and another complained that the CE instructional aides were paid for but did not work full eight-hour days. One regular classroom teacher suggested that Title I money would be better spent to reduce class size by hiring more regular teachers.

Other complaints involved the fact that regular teachers were not notified early in the morning of the absence of compensatory teachers, resulting in upset schedules and wasted time; that some teachers got aides and other didn't, and the reason for this was not understood by the complaining teachers; that the principal discouraged use of special equipment and materials by regular teachers, even though the teacher supposed them to be available to regular teachers; and the perception that compensatory students got special activities and privileges such as extra field trips which the teacher felt was unfair to the regular students. Finally, two teachers said they just did not like having children pulled out of class, without detailing specific bases for that feeling.

The problems and complaints verbalized by regular teachers are truly varied. In very few cases was the same complaint made twice. It does appear, however, that many of the complaints arise out of misunderstanding of and fear of non-compliance with, program regulations; faulty understanding of the intent of the programs; and poor internal communications at the school level. Compensatory teachers in five different schools expressed their general approval of programs. Like regular classroom teachers, however, the complaints or expressions of problems outnumbered the expressions of positive feelings.

In the Topical Summaries, four CE teachers complained of being used as substitutes and for other duties. In addition, in the Classroom Qualitative Summaries, observers cited 14 observations in which compensatory teachers had extra students from classes with absent teachers. (Six citations occurred in one school, three in another, two in another, and the rest in different schools.) In most of these cases, the students were divided among teachers present because there was no substitute. In a few cases, troublesome children had been removed from a class with a substitute who could not cope and had been sent to the CE teacher.

In other complaints, two CE teachers in different schools cited a lack of administrative support, and three in separate schools complained about disruptions caused by parents, unexpected calls to meetings, assemblies, and changes of schedule. Three CE aides in different schools complained of treatment as inferiors or of having to perform duties which they felt were the responsibility of the teachers. Sporadic objections were made to lack of cooperation in scheduling, too much paperwork, too much time spent in picking up students, use of CE materials for high achievers (in one case), classes being too large, materials not arriving on time, standardized tests being inadequate, and poor location of compensatory facilities. There were also two complaints that reductions in funding and personnel diminished the effectiveness of programs.

Again, the particular complaints are varied. Several reflect the scheduling and location themes discussed in previous sections of this report, and several seem to reflect internal communication problems or faulty understanding of fear of violation of program intents and guidelines. Unlike the complaints registered by regular classroom teachers, however, several of these complaints seem to reflect situations involving school administration (e.g., use of teachers as substitutes, policies pertaining to parent conferences, meetings, and assemblies, and materials not arriving on time). Perhaps principals could be made more aware of the need to monitor and prevent problems in areas such as these.

CONCLUSION

While positive opinions from principals on the effects of CE programs far outweigh negative opinions, the reverse is true for teachers. This result might be expected considering that principals are generally involved in the process of selecting compensatory programs and working out the details. In a sense, they are supporting their own selections and decisions. On the other hand, teachers often are not consulted, and programs which they may or may not like are frequently imposed upon them. In addition, data collectors are more likely to focus on negative rather than positive comments when reporting attitudes, which probably adds to the disproportion. The issue of stigmatization was of little importance in the opinions of principals, teachers, and students.

APPENDICES

The three Appendices that follow are titled Settings, Lessons, and Classroom Management, and each has examples of classroom descriptions that provide the reader with more insight into the diversity and quality of services and practices found in the SPHPS classrooms. There is considerable overlap among the three Appendices. For example, those classroom descriptions included as representative examples of settings are also quite diverse with respect to lessons and classroom management.

The classroom descriptions were tape recorded by our observers on the day they made their observations. To provide the reader with more of a feeling of "being there" the transcriptions have been left essentially intact with the exception that fictitious names or initials are used to protect the anonymity of the teachers and students.

APPENDIX A

SETTINGS

APPENDIX A

SETTINGS

Example 1: A Pullout Programmed Tape Reading Lab

This teacher is a Title I compensatory teacher responsible for RIT (Reading Intensive Training) instruction for groups of students from two regular homeroom classes during this period. Students ranged from fourth through sixth grade and included possibly as many as seven fifth-grade students from another teacher's combination fourth- and fifth-grade classroom. Instruction is provided on a pullout basis. Either the teacher, the aide, and most often, both, accompanied students from their homeroom classroom into the language lab which is characterized at this school as the reading language center using verbal skills curriculum. There are three long rows of cubicles situated parallel to one another in the classroom. Each row is divided on one side into six segments. There is a matching cubicle on the other side, making a total of twelve cubicles per row and 36 in total in the lab. There are long tables at both the front and side of the room on top of which are placed files containing cassettes, and large files containing reading programs with audio-visual skill books and answer sheets as well as mastery tests. Each cubicle contains a small recording device and a set of headphones. Instruction is primarily self-directed, and students listen to tapes and work in their workbooks or answer sheets, progressing from level to level as an individual student has mastered a specific skill. At 10:03 the students entered the lab. They immediately went to the tables and collected their assignments. This was done without command of the teacher. The teacher monitored group activity from the side of the room and then walked about the area, aiding students to obtain material and to manipulate the recording devices preparatory to instruction proper. At 10:07 the aide entered the room. The teacher went to several students, plugged into the recording devices, put on a set of headphones, checked the volume and listened to the tapes as the students worked a given exercise. The teacher either instructed students on manipulating the machine or gave them feedback on their performance, keeping careful records of their progress. The aide had similar duties but appeared to spend more time checking students' assignments and progress on her record charts. It took perhaps six minutes for students to gather their materials and finally get to work at their cubicles. However, students were not truly off-task. That is, they did not socialize nor were they woolgathering, but it took that long for the entire class to get to work on its assignments. The teacher worked with all 16 students during the period. In fact, almost all her instruction was geared to one-on-one instruction. The time she spent with one student varied from a brief few seconds to six or seven minutes, depending upon student needs. (Comment: It was difficult for the observer to overhear interaction between teacher and student.) The teacher was very quiet and students were also very quiet. There was almost no offtask activity at all during the period, and as the teacher went from cubicle to cubicle, there were no clear sight lines. However, observer did try to follow the teacher. The situation was further complicated by the fact that the teacher and the students were plugged into the recording device, and the observer could not overhear machine instruction — taped instructions. The aide worked with about ten students. She worked with one student for a long period of time at a cubicle, perhaps ten minutes, and the rest of the time was spent seated at a student desk at the side of the room checking on students' completed assignments.

Students would bring the worksheets to the aide as they completed them, and in some cases they brought the worksheets to the teacher to be checked over. (Comment: The teacher's manner was quiet and very businesslike with the students. She appeared to function more as a record keeper than as an instructor. However, she did spend a considerable amount of time with several students, giving them feedback on their performance.) As stated, the aide spent much time with one student who was having difficulty working his machine. The aide told the student, "You know what you're doing — you're just careless." But the aide's manner was supportive. After the aide had worked with this student for ten minutes, the teacher came over and continued to work with the child for possibly another eight minutes or so. Tapes appeared to be concerned with reading vocabulary development and phonics, with emphasis on reading and comprehension. As the class drew to a close, more students got up from their cubicles and went to the teacher and/or aide to have their work checked. When students had finished their laboratory assignment, they were told to get a free reading book from a stand at the back of the classroom, and many students got up from their cubicles and milled in the back of the classroom, selecting free reading books. The teacher intermittently monitored student behavior and walked about the classroom. At 10:44 the teacher said, "Everybody should stop and give yourselves time to put your books up," and instruction ended. As stated, there was very little real off-task activity in the classroom. During the scans the students who were coded as off-task were either getting up to get materials or were walking over to the teacher to have their work checked.

Example 2: Computer-Assisted Instruction in Reading and Math

This reading class today was held in the CAI lab. CAI is an acronym for computer-assisted instruction. The room is set up with 15 computer lesson machines and one master machine or terminal with printout. There is a lab assistant funded as an aide who stays in the lab at all times. Her job is to oversee the use of the machines and to fix mechanically what is possible for her to fix. Today 23 students, their teacher and one aide came from room 303 to use this lab in a regularly scheduled period. Only 13 of the machines were in order, so 13 students began immediately working the machines during the first part of the period, while the other ten sat at a long, rectangular table in the middle doing seatwork. The only noise in the room was from the machines, except when the children spoke among themselves at their seats. The teacher told this observer that the children at the machines would stay there about 20 minutes. The lessons are individualized for these students who punch their own ID to get their particular lesson, and each lesson contains both reading and math. After about 20 minutes, the first group should have finished the computer lesson and taken seats at the long table, and the remaining children then come to use the machine. The aide who came with the teacher seems to be the disciplinarian if one is needed. The aide who stays in the computer room goes to a machine if a child seems stymied or a machine stalls. The teacher sat at the desk most of the time monitoring the class but interspersing this with walks around the room, looking over the shoulders of the children who are at the machine. She did not instruct them, however, but let them do what they were doing at their own pace. The teacher also spoke briefly with the children who were sitting at the rectangular table, seeming to assist them with the work that they were doing there. When any students from the machines finished their lessons they got up, and students from the table go to replace them at the machine. This marks the beginning of the second group. As these lessons are programmed into reading and math segments, it is somewhat impossible for an observer to tell what is happening. The teacher said to this observer later that the individualized lessons are roughly divided into ten-minute math and ten-minute reading segments, but it is hard for her to know exactly how much allotted time from each of these lessons is really programmed for individual instruction to the particular child. Each child has an ID number, and when he punches this number as he sits at the machine at the beginning, his own particular lesson comes up. The children at their seats were doing work similar to the lesson on the machines. The way the class is scheduled is that 15 of the children may use the machines at one time, and the allotted period for one-half of the class is 20 minutes, and then the other 15 exchange places for about 20 minutes, which makes up the 40 minutes allotted time. The children at their seats are also doing math and reading indiscriminately, each one working on what he needs special drill on. This lab is arranged so that the machines form a "U," and the teacher's desk and the desk of the permanent aide, with her computer terminal is in the hollow of the "U." There are few displays in this room, and the whole focus is on the machines. There is, however, a bulletin board with the grades — computer-printout grades, that is — of the students posted there. These grades are from the work that the students do and are added to once a week when a printout is obtained. In this way the children can see what progress they are making, and the teachers can see how their classes compare to other classes. This seems to be what they are interested in. Other than the short time the teacher spent with the children at the long table doing seatwork, there was no instruction, since the machine is doing the instruction.

Other Circumstances. One thing that was noticeable, as the children were leaving this room, is that apparently from this class they have picked up some computer jargon. They were using words and phrases like data processing cards, control data and printout sheets.

Example 3: A Pullout Title I Reading Lab With Little Teaching, Use of Bad Grammar, and Schedule Slippage

This was Mr. J's Title I reading lab. Mrs. C and the aide were present in the other half of the lab working with 2nd graders and 3rd graders. I first observed this group on Tuesday, March 13th, when six 5th graders were expected, but no one showed up. The teacher said on that occasion, "They may be testing in their regular homeroom." He didn't go to find out, however. He just sat around during that period. Today, Thursday, I came in to observe the group again. Two children were in the class at 9:55, and the teacher said, "The rest of them hasn't came yet." The teacher was reading a newspaper at his desk. After a couple of minutes of reading the newspaper, the teacher engaged in a conversation with a 2nd grader at a desk near his. (Comment: I scored that off-task because the 2nd grader was under the supervision of the other Title I teacher, not Mr. J.) Two children were at the study carrels working on dittos. The teacher was now filling in daily record charts at his desk. One boy was at the "Word Attack" carrel, and the other one was at the SRA carrel. The teacher sat at his desk, staring, and he shifted his eyes to one side whenever I had occasion to look at him. At 10:15 he said to one boy, "How many sheets you do?" The child went up to him and read various items off of the ditto sheet, and the teacher checked the child's work. At 10:23 the teacher was still checking dittos, correcting papers and helping that child with comprehension of rules regarding doubling consonants when adding "ing" and "ed" to the end of the word. A bell rang at 10:36, and the children left to go to recess. The teacher said, "See you after recess," in a rather loud voice. One kid returned at 10:47 to get something, and then he left again immediately. Another child came back and got a pencil. The teacher left about 10:45, then returned at 11:04. (Comment: Neither the kids nor the teacher came back after recess as scheduled which leads me to infer that the teacher was trying to pull the wool over my eyes when he said, "See you after recess." I suspect that he may hardly, if ever, see these kids after recess. The 2nd grade teacher in here, Mrs. C, told me up front that she dismisses the children at recess time because their regular homeroom teacher suggested that they wouldn't get much done in the ten minutes that are scheduled in this Title I lab after recess. Her behavior in regard to this is to be contrasted with Mr. J's, who apparently chose to try to fool me as to what goes on in this regard in his reading lab.)

Example 4: A Pullout Math Lab

Mrs. B teaches 5th grade math in a learning resource center on the premises. Five students entered Mrs. B's classroom. Three students went and sat at one table, and two sat at another. (These are small round tables in the room.) The teacher explained to the students that the first thing that they would do would be to listen to a tape. On this tape there were 27 problems. The students have six seconds to answer each problem read on tape and the next problem would be given. She explained that the students needed to go on if they had not completed a problem or they'd miss the next, and that there was no time for them to ask questions or talk to each other. She had the students number a piece of paper from 1 to 27 before the tape was begun. The teacher got the tape ready and said, "Everyone ready? Okay, no talking, here it goes." (No one was talking, but she was just reinforcing the fact that they wouldn't have time.) On the tape the problems were given, like nine fours. She would wait six seconds and give the next problem — five eights — and the students would write the answers down on their page. During this time the teacher stood over the students watching them work. All of the students were listening to the tape and trying to answer the problems. After all 27 problems had been delivered on the tape, the tape person went back and read the answers to all the problems, and the students corrected their own papers. The teacher praised the students after it was finished for the good listening job that they had done. She then went around and looked at each student's paper to see how he scored. She turned to one boy and said, "Is it too bad to tell?" and the boy nodded yes. They sort of smiled, and she went on to another student. (In looking over his shoulder during the exercise, she was already aware of how well he had done or not done.) After she had found how everyone scored she said, "Most of you did well, and all of you should be congratulated on what a fine job you did listening to this tape." She then had all of the students move to one table. Mrs. B sat down at the table with the students and used a set of multiplication flash cards. She had about 120 to 130 of these cards. She would hold one of these up at a time to one student, and the students would try to answer it within ten seconds. If the child answered it correctly, she would give him the card to hold. If they did it incorrectly, the next student was given a chance. If the next student got it correctly, the teacher did not just hand that card to the second student. She showed the first student and told her to study it and make sure that she wouldn't miss it again, and then she'd give the card to the second student who did it correctly. She went in order of the seating arrangement. One of the only reprimands came when one student was to do his problem, another was doing it also and counting out loud so she said, "You count silently or you'll distract the other student," and the student did quiet down. There were numerous times that the teacher would praise students with a "good" when they got the correct answer. There was also a pleasant camaraderie in the room and good communication between the teacher and the students with a sort of joking comment or humor. "If you don't get this one, it's all over," the teacher said to a student, and then showed a simple problem like 6 × 1, and everyone would laugh, and the student would get it correctly. To one student she said, "You got that answer before I even got the card up. That was very good," and that was basically because the student had responded so quickly. The teacher gave continual praise during this time. The students showed their enthusiasm by leaning forward in their chairs, by keeping their eyes on the cards at all times, and the quick responses that they gave when it was their turn. There was smiling going on and a friendly atmosphere indicated with these smiles. Comments were also made like, "I thought I'd get you on that one," and the student would smile because he had gotten it correct. The above comment was made by the teacher. If the problem got really simple, like 1 × 0, there would be laughter and enjoyment with that. It never became disorderly or loud. One boy mentioned earlier who had done poorly on the tape problem talked a little slower in answering the problems in the class. However, he was treated the same as the other students, with maybe a little extra prompting by the teacher, like, "Now look at this number. It may be back," indicating that the problem may come around again to that student. Often you would hear a student responding, "Oh, that's easy," and the teacher would say, "It's only easy if you know the answer." Once, when a student kept chanting that it was easy, the teacher just said, "Now, be quiet," and the student was quiet. With a few of the flash cards some of the students made reference to the film or the recording by saying, "Oh, that was one of the problems that we had to do off the tape." (This showed that students were not only remembering what they had done earlier in the class, but that they could see the relationship to exercises.) A student gave a quick response, and the teacher said, "You were on the ball, that time," and shortly after that all of the cards were given out to the students. Each student then counted the number of cards that he had, and the person who had the most was the winner. The teacher told the students that they had done a very good job because the cards had been very evenly disbursed. Mrs. B then passed out worksheets. These worksheets had three columns of problems, 20 problems in each column. They were multiplication and addition problems combined, such as $3 \times 9 + 4 =$. The students started out with the first row to see how far they could get before the end of the period. When they completed that first row the teacher would come over and collect it. The teacher had previously picked up the paper and done the problems herself so that the correcting would be done quickly and easily. If the students got 100 they would receive praise about the good work they had done. If a student had missed one of the problems, they were asked to redo it. Students had spread out after the last exercise in the room so that they were all doing their work independently. The students that finished the first row went on to the second row. Soon the bell rang, and the teacher told the students that they could finish the paper at another time and to put the papers in their folders. They all went to a shelf where folders were kept for themselves. They put the papers in, lined up at the door, and when they were all there, the teacher opened the door, and the students were walked back to their class.

Example 5: A Non-Intensive Pullout Reading Lab

The reading compensatory instruction for the four students in this group took place in a compensatory education room across the hall from the regular 5th grade classroom. The room measured about 20 by 25 feet and contained three semi-circle tables, each the work area of one of the three compensatory teachers using this room. The teachers generally sat on the diameter edge of this semi-circle and the students along the circumference which was large enough to accommodate perhaps six students comfortably. This observer arrived one minute before the scheduled time for this group. The compensatory reading teacher was working with two students, and at 10:46 she dismissed these students and left with them. One minute later she returned with four new students. As they sat down and she took up some cards with words on them, there was some discussion and disagreement among them about whether they had had these words before. As the teacher proceeded to show the cards one-by-one, having students in turn read the cards and name the number of syllables, she prompted them fairly frequently with phonetic cues, and occasionally complimented a student on reading a word without any difficulty. There were some interruptions. She asked one of the students to go get a damp paper towel. These cards were covered with plastic and could be marked upon, as, for instance, marking where the syllables were. The paper towels were later used to erase such marks. There was another interruption when the students brought up the matter of another teacher's new hair-do, that is, new wig, and expressed their opinions about it. Another comp ed teacher entered with two older students, sat down at one of the other tables and began some discussion about their programs, apparently counselling them regarding it. She went on with these students to do spelling. Two more students entered very shortly and discussed some matters with this same teacher. One of them, before leaving, went to a drinking fountain very close by the group I was observing, at which time all of the students in this group, together with the teacher, stopped what they were doing and looked at this student who had been somewhat noisy while in the room. The group then continued with the reading words. A student bearing an extension cord entered the room. The teacher told her to put it on the table nearby. Shortly afterwards the teacher passed out dittos. The students objected and argued about whether they were capable of doing them. The teacher said that they were. They then began reading a sentence, each in turn, and filling in blanks, looking at a list of words at the top of the ditto to choose the appropriate word. They then were to write sentences for these new words, and there was a certain amount of discussion about the use of particular words, the teacher not being particularly accepting of their usages. In the meantime, the teacher had taken from one of the students a thin, narrow piece of metal about six inches long, as might have been removed from the edge of a wooden ruler. She, in fact, asked where he got it, and I imagined that that was where he did. He replied that he found it on his way to school. In any case, she had taken this from him, and there was a fair amount of time spent arguing about whether he might have it back, she insisting that she could not be responsible for his putting someone's eye out. Shortly before 11:15 she asked them to hand in their papers. The students protested, claiming that the time was not up yet and they still had one minute. The student who had been relieved of his piece of metal asked for it again, and the teacher refused to give it to him. "Come on, goodbye, let's go," she said. The students left somewhat reluctantly.

Example 6: A Chaotic Pullout Computer Reading Lab

This was a reading class held in the computer-assisted instruction lab. The teacher brought his class of 14 pupils to the lab; five stayed in the homeroom classroom for about 15 or 20 minutes after this class had begun, to finish something they had begun prior to this period. The 14 children were very noisy coming into this lab and took a very long time getting to their places at the machine. The teacher, Mr. B, does not seem to be able to control this group of children. When he yells at them they yell back. When they finally got placed at their machines, they were not attentive and kept looking around the room, whispering, trying to trip the student next door or pointing the keys on the machine like a piano. (I could not see what happened on the machine then.) The one student who was at his seat doing seatwork was constantly looking at the other children to see what all the commotion was about. Before any semblance of order took place the teacher went out of the room and stayed ten to 15 minutes. The aide, who is permanently placed in this room, was very nervous and seemed to try to get order, but the children would not listen. While the teacher was out of the room the other five children came in and disrupted everything, telling the students who were at the machines to get up, etc. The teacher then came back in and tried to restore order but could not. The five kids who came in late finally got a machine when some of the pupils finished. They never did any seatwork. They had papers on the table but did not even attempt to work except when the teacher was standing directly over them in a threatening manner. He boxed one boy's ears for throwing his book at another. The CAI aide was very agitated and disturbed. She walked from place to place trying to get some order, and kept going to the machines as if to see that they did not get broken. She spoke sharply to the students who were joshing around and threatened to make them leave the room, but they did not pay much attention. The teacher seemed to be at a loss to gain order. He said that the kids were tired from testing which is going on in this school and were also excited by the upcoming holiday. He seems able to detach himself from what is happening. At one time during a particularly loud and disruptive occurrence, he was reading something and he kept right on reading as if nothing was happening. Not much learning seemed to take place because no one was motivated or interested in the lesson. Also, the general disorder was to the extent that if one wanted to work the others would not let him. One pupil tripped the chair of the student using the machine next to him, causing that student to fall. This brought loud outcries from the offended student and several others who joined in to take sides. All this was with the teacher and the CAI aide in the classroom. Mr. B, the teacher, told this observer that this group of students was very low level in reading, some just over the second-grade level and that he thought the printed lessons preprogrammed on these machines were not interesting to them. He also said he did not believe in machine teaching for students who are not self-directing because he felt that these students needed support at every stage to be encouraged to keep trying, and they couldn't get this from a machine.

Example 7: An Excellent Pullout Reading Lab

This was a reading group held in the Title I learning lab. There were five children in this instructional group. They happened to be second graders. In the same lab there were five children in another group. This group was taught by Ms. C, and I would say that there was very little off-task time in this group. What off-task time there was on the part of students was solitary, self-initiated doodling and daydreaming. There was only one occasion when I saw a student distracted by another student. Each child had a variety of material to work with for the full time. There were 49 minutes during the instruction period. The teacher was very active and positive, moving from one child to another as they worked at their study carrels. Six children came in at 1 o'clock, and Ms. C had Dolch words, SRA kits and other materials ready for the children. The teacher said, "Let's get busy now, okay?" and walked from child to child, monitoring and helping. Another time she said, "Okay, let's get in our seats and get busy, okay?" Her tone of voice was pleasant, light, and conversational. She never used a tone that could be considered reprimanding or harsh. The teacher said, "Okay, let's go over it one more time," to one particular child, "What do you call this work?" The students were quiet and on-task 98 percent of the time. The teacher bent over a child and talked quietly for a moment with him. The teacher helped a child mark Xs on the Dolch Check List on the board. This check list was tacked to a bulletin board. The teacher is well dressed in grey pants and a vest. She walks from child to child in a relaxed but not lazy fashion. One child read softly to the teacher. The teacher leaned forward (in the best Rogerian fashion) and checked the child's work with a red pen, marking, "Excellent." With another child she said in a friendly fashion, "We're going to do better next time, okay?" The teacher shared a seat with a girl and listened to her read, saying, "One more time. Not bad." She seemed pleased with the girl's progress. To another child the teacher said, "Okay. Can you say these?" and on another occasion a child held up a book for her to see and said, "What's this word?" and the teacher said, "Bulldozer." The teacher said to another child, "Okay, that's very good." The children got other materials from the vast supply of different materials and projects that were set up throughout the lab. As soon as they finished one project they generally got another one. Occasionally a child would ask the teacher what to get next. The teacher seemed very alert. I saw her on one occasion listening to one child while her eyes were scanning the room, monitoring all the others. An example of her alertness was that she handed a child a crayon, apparently anticipating his needs. Two children were working together quietly with flash cards, facing one another. At about 1:45 the teacher began arranging papers and packets at her desk. At 1:48 she said, "Get in line," and "Richard, come on, sweetheart," and the children lined up. In fact, she had a little mark on the floor where they were supposed to stand behind the line. There was a little shuffling around as they got in order, and they left at 1:49.

Example 8: A Pullout Reading Lab With an Aide as the Teacher

This is a compensatory fifth grade reading class taught by Mrs. K. The first student enters at 1:43 and the rest enter a moment later. The teacher enters the room at 1:44, goes directly to a filmstrip projector and turns it on. The students are grumbling about the candy sale, and the teacher says that she will be glad when it's over. The students then begin complaining that their teacher wouldn't let them go to the candy sale today because some people were fooling around. The teacher is very unsympathetic to their problem. She starts off with a filmstrip at first, making sure that the students are reading aloud. She then lets the filmstrip run by itself, and the students continue reading silently as she goes over and begins cleaning up one table, and then scans. One student is eating candy during the lesson. The student starts looking around and then begins looking at another book while the filmstrip is in progress. The filmstrip ends at 1:49, and a number of students jump up and fight to rewind it. The teacher passes out questions concerning the story to the students. She puts the papers on a spot at different desks where she wants the students to sit. One of the students doesn't want to do it and is questioning her. The teacher says, "Don't give me a hassle, Johnny," in a hard tone of voice. She then passes out the rest of the papers and gets the students working. She is scanning as they work. At 1:53 they finish and the teacher has one student read the first question and they begin correcting. Johnny says, "Just read the answer," The teacher replies, "Just be quiet. We'll read it all. You're not going anywhere," again, in a hard tone of voice. One student is playing with money, letting it drop on the table. The teacher is picking different students at this point to answer the question. Johnny cuts in and tries to tell the teacher who to call on. The teacher quiets him. They finish the corrections at 1:57, and a number of students get up to leave. The teacher tells them to sit down. She then passes out another worksheet. The students don't want to do it. They are talking to each other in loud voices. The teacher is correcting one boy who missed 60 percent of the questions on the test on the filmstrip. From the faces that he is making and his flippant attitude, it appears that he may have missed them on purpose. At 2:00 some of the students are saying, "Let's go." The teacher collects the papers, and the students are leaving one by one. At first the two boys and the girl leave. Two other girls remain for a moment working on the paper until they finish. They hand it to the teacher and tell her, "Goodbye." The class ends at 2:01.

Example 9: A Good Pullout Reading Lab

This is a recording for six groups—a summary for six groups being done as a single summary because they were observed in sequence, back-to-back. The groups were all taught by the same teacher and, therefore, many of my observations apply to all six groups. I will have a few comments separately for each group after I have made a summary for the six groups together. These six groups were taught by a Title I reading teacher in sequence—three in the morning, each lasting approximately 50 minutes, and three in the afternoon, each also lasting 50 minutes. The groups consisted of six to eight children. The instruction took place in a large room known as "Pool Number One." At one time it had either been, or been intended to be a swimming pool for a junior high school building. This teacher and these groups worked in the central area. Two other teachers worked in the same large room, one at either end. In general, the noise level of the room was not excessive; I was aware of it at first, but ceased being aware of it perhaps after the first group I observed. At no time did either the teacher or the children in any of her groups appear to be particularly distracted by the other groups instructed in this same large room. The room contained a great deal of equipment of all kinds. The equipment was used in groups and by individuals—much of it consisting of things that I was unfamiliar with. There were all kinds of cassette-operated equipment, records, which the children used quite freely, easily, going from one activity to another, equipment used by the teacher, various viewers, etc. The physical arrangement in this large room was open. There were quite a few small tables with chairs around them, and individual desks with some of these pieces of equipment, such as System 80. Things that served as dividers did not really clearly serve as dividers, but there were bookcases, cabinets, easels, etc., scattered about the room. Upon sitting down, there were some spots used by some of the children occasionally which I was unable to observe without moving. However, in general, I could see not only the children in this group but the children in other groups, although I could not hear the children in other groups or their teachers in any consistent manner. Each group of children entered the room, usually shortly after the last group had left, but on a few occasions some of the children arrived early. Generally, as they arrived, they either went and got their folders and took them to a table and sat down and opened them, starting to look through them or starting to work, or, as was the case with some of the groups, the children simply went and took seats waiting for the teacher who then distributed the folders. (Comment: It seemed to me that those groups which I described first just now—those where the children went and got their own materials when they arrived—were characterized later by less off-task, more on-task behavior, than those groups who came in and sat down and waited for the teacher to pass them their folders.) There was a similar period of perhaps up to four minutes at the end of each period. That is, the teacher announced to the children that it was time to stop their work and to put away their materials. Usually she would say, "If you have not finished you can start again tomorrow where you left off," but, in fact, frequently some of the children continued to work, and frequently she continued to help individuals during this time. The children then lined up to leave, and the teacher escorted them to the door and then returned to await the next group, which usually arrived quite promptly. There were two fire drills during the day. The one in the morning was first announced over the loudspeaker and took approximately 12 minutes from the time the children left the room until the time they returned. The one in the afternoon was not announced—it took approximately 7 minutes and came right at the end of an instructional group so that instead of returning to the Pool Room, that group of children returned to their homeroom, and as we came back into the Pool Room—the large room where this instruction took place—a new group arrived immediately. As I noted earlier, there were three groups in the morning, each lasting approximately 50 minutes. In both cases the smoothness of these groups, that is, how well they were organized, deteriorated over the three groups. The first group functioned very smoothly, and the third group was a little less smooth. Let me correct that: I would say it was noticeably less smooth. In both cases there was more off-task behavior and more behavior problems, that is, the teacher engaged in more behavioral management activity in the case of the third group in the morning and in the case of the third group in the afternoon. (Comment: It is not entirely clear to me that a fatigue factor was at work. However, it seems likely and certainly possible that the greater amount of off-task behavior and the greater amount of behavior problems in the periods just before lunch and just before the end of the day were related to a fatigue factor. On two occasions, once in the morning and once in the afternoon, the teacher made what I would take to be an informal use of one of the other Title I teachers in the room. When I say "informal," I mean it is not something that is regularly scheduled or for which there is a regular arrangement, as far as I know. In the first instance this group joined the students working with the other Title I teacher for viewing some stories on television. In the other case, this teacher directed three of her students to go work for a period of time with the other teacher. The teacher explained to me that these three students were working at a lower level than any of the others, that the other teacher had materials for these students since she worked with first grade students, and therefore, it was convenient and appropriate that they go and have some instruction from this teacher since she had materials developed for that level. These three students worked with the other teacher for approximately 12 minutes out of the 45-minute period. This teacher worked a great deal with individuals, going from one student to another, and spending up to five minutes with each individual. During her times with individuals she was fairly frequently approached by other children who wanted help. She usually responded to them promptly, and their inquiries were usually very short, such as, "What is this word?" But she did not always do so. On a number of occasions she reminded the student that he was to wait for her, that the students were not to follow her around but she would come to them. However, she was not consistent in requiring this, and the pattern, in fact, was for children to come to her quite frequently. She also spent a good deal of time working with students in small groups, anywhere from two up to the whole number, eight. In general, when she was working with a small subgroup, those students who were members of that subgroup were almost never off-task. They were almost always engaged, frequently enthusiastically, interested and lively, but not exuberant. Over the course of the day I would characterize off-task behavior on the part of students mainly as getting materials, putting them away, or waiting for help from the teacher. There were perhaps two or three children over the course of the day whose off-task behavior could be characterized as a behavior problem. They were somewhat disruptive, dissatisfied in some way, and troublesome. Only one of these children constituted any kind of problem over a period of time. In general, children worked quite well at their individual seatwork and were on-task. When they finished what they were doing, they went and got something else to do without disrupting anyone else, and things ran smoothly. There was a fair amount of evidence that the children generally knew what to do without being told. I observed one instance when the teacher passed out dittos and simply waited a minute while the children wrote their names and did whatever kind of heading was required on the dittos. This teacher engaged in virtually no off-task behavior all day. She appeared to have preorganized and prearranged the work for the children. She used her own time in an alert manner. She had the ability, one might say, to do two things at once. While working with an individual child she typically looked up while listening to what the child was reading. She would look up and survey what the other children were doing, sometimes calling out to the child some kind of direction in a well-modulated voice. She was typically very soft-spoken, and her tone was generally matter-of-fact. Any kind of reinforcement was matter-of-fact and rare. When she praised a child for work it was hardly noticeable. There was just very little emphasis of any kind, and when she had something negative to say about behavior it was not harsh. She moved calmly. She seemed to have a thoughtful demeanor. When she was working with an individual child and looked up, it was not a distracted or daydreaming kind of look. She clearly seemed to be sensing what other children were doing. She had a way of phrasing things positively. I will give two examples: On one occasion the children were to use words in sentences. One child offered a sentence that omitted the particular word. The teacher responded by saying, "That's a very good sentence, but it doesn't contain the word that we're working with," and she went on to another student. On a few other occasions when students were coming to her, interrupting her more than she wished, she spoke to them saying, "Work on your own a bit longer. Perhaps you can figure it out." It had the same effect as saying, "Please return to your seats," or "Don't bother me." The children did return to their seats and continued working on their own. This teacher frequently directed the children to behave as she, herself, did without pointing out, however, that it was like herself. On several occasions she asked the children to lower their voices. On one occasion, she told a child not to read aloud because it disrupted the other children. Often she said to a child, "Take your time. Think about it," and she herself seemed to be taking her time, thinking about things, acting calmly and thoughtfully. She asked the children to correct their own work. She reminded them to consider, "Does it make sense?" Once, when a child came to her and asked her the meaning of a word, or rather what a particular word was, she said to him, "Cover the word with your hand; then read the whole sentence. Think about it, and see if you can figure out what the word might be. Then uncover the word." She herself then made the letter sound—the initial letter sound. However, she never directed a child to sound out words. Her directions tended to be, "Think about it. What would make sense?" When she was using a controlled reader she stopped, rewound the reader and repeated parts, saying in particular, "This is a question. You have to read it like a question is read," and then demonstrated the intonation of a question. Again, when she was using the controlled reader and the children were reading in unison along with it, she admonished them, "Don't drag your words." This teacher smiled a lot. She seemed comfortable and happy with what she was doing.

Example 10: A Math In-Class Setting

Mrs. M is the instructor of one of the fifth-grade classes. During the observed period the class of 25 students was, for most of the period, divided into two separate groups, one working with Mrs. M and one working on a review of the subtraction of fractions and assisted by Mrs. E, the compensatory education math teacher for fifth-grade students. However, the class began at 10:50 when the teacher stood at the front of the class waiting for students to come in from the bathroom and then stated, "All things off your desks, please." She appeared to be waiting for the comp ed teacher to enter the room, for she went around the room circulating and asking for students who needed help and rearranging them spatially, according to whether or not they needed additional help on the material from previous days on the subtraction and reduction of fractions. She placed them into two separate sections of the room. In some cases, those students who stated that they needed help were placed in one area of the room, and in other cases she specified that a child should join that particular group. For the students who did not need help, she stated, "I will be with you as soon as I get these guys started." Getting started referred to the group being asked to copy a set of fraction problems which she had placed on the board. After doing this, she left the room to check and see if the comp ed teacher was coming, stating this to the class. This only took about eight seconds because the comp ed teacher's room is directly opposite to her room. When she came back the teacher began going over the set of problems with the entire class, beginning by asking the question, "What's an even number, group?" She got very little reaction from the class, and the students did not raise their hands and seemed somewhat confused by the question. She said, in a half-joking, half-serious manner, "Why do I get the impression I'm speaking Polish?" It soon appeared that a good number of the children did not understand what an even number was, and so she proceeded to explain that. Finally, at 11:04 the comp ed math teacher entered the classroom, and the teacher conveyed to this comp ed teacher what they were doing and then asked then that the comp ed teacher work with the students who needed help. From this point on the group reviewing fractions worked with the comp ed teacher and the regular teacher moved to the side of the room in which the other students had been waiting for some 14 minutes. There was once again more movement and switching of chairs, and at 11:05 the teacher began explaining and going over the problems with the other students. At 11:09 the teacher asked the students to get out a math book in order to assign problems for them to work. However, she changed her mind and wrote a series of problems on the board which she asked them to simply copy onto their papers. This took several minutes, and the students were then supposed to work the problems at their seats. Throughout this period she went around and individually worked with students, in some cases checking their problems and giving them feedback, and in other cases helping them with a question that they had on some aspect of the process. At 11:16 she assigned several students to do the problems on the board, and when it appeared as though all answers were right, there was virtually no discussion of the problems. From 11:18 to 11:31 the students continued working individually with the problems or in small groups as directed by the teacher, and the teacher's behavior consisted of individual interactions with students. Throughout this time I counted at least 11 different students with whom the teacher worked, in some cases for very short periods, and in other cases she would pull up a chair by the child's desk and work with the child individually for several minutes at a time. During this same period, other students came up to the teacher and asked her questions, and she also interacted in brief semi-joking sessions, monitoring students and keeping those more talkative students on-task. There was only brief instructional management by the teacher, and this consisted primarily of the time it took her to walk from one student to another, plus the brief time that she spent putting the problems on the board. There was some behavioral management, and this occurred mainly as students were working individually and in groups, and as the noise level of the class began to rise. In one case she reprimanded someone for rocking back and forth in the chair, making the statement, "Someone's rocking," and no further comment. Later on she said, "John, it's not a rocking chair." The particular child, John, was the object of quite a bit of firm, yet not irritated or angry reprimands. The teacher monitored John to make sure that he was not talking about matters other than math-related matters, and threatened him with punishment if he did not finish, saying, "Come on, John, you don't have a choice. It's now or recess," but she laughed slightly at the end of the comment. In general, the teacher's reprimands were fairly light-hearted and said with a smile. However, as the noise continued, her voice began to lose any warmth and became more serious. For example, she said in a very firm voice, "Donald, that conversation has nothing to do with math," and "John, you're either going to do the problem or you're going to go to the other side of the room," referring to moving him from the peers he was working with. Because children were allowed and encouraged, in some cases, to help other students with problems, this generated a lot of conversation. However, the teacher seemed to be very good at spotting when it was subject related and when it was not, and finally told at least one student to go sit down because he was not actually working on helping another student. She was aware of the problem of noise generated by task-related behavior, and said, "There's lots of talking that has to go on, so it will have to be quiet talking." For example, at 11:24 I looked around the room and there were at least two groups of from two to six children working together on their math problems. In addition, some children had finished and were doing other things in a group with another child. For example, two students were looking through a biology book at a picture and commenting on the picture. Thus, the teacher, at various intervals, would help another child, and she said to the first child, "Richard's problem is that it's easier for him to do it if you do it for him." She also complimented the students saying, for example, "Some of you are doing this reduction very well." She also encouraged students to help other students saying, for example, "Kevin, go sit with Mike and make sure he knows what he is doing." The primary source of student off-task behavior occurred, as mentioned before, when they were waiting for their own instruction to begin and during times when they were switching seats or moving around from one child to another. Sometimes it was difficult to tell whether the students were legitimately conversing or whether they were conversing on non-work-related matters. Mrs. E. arrived somewhat late to work with the class, and her behavior consisted totally of individual work with students. In one case she sat down with a child at his desk and worked with the child for over ten minutes. This occurred on several occasions, and usually, she would sit at the child's desk, although on at least one occasion she knelt down in a squatted position so that her head was at the same level as the child's. She appeared to interact very intensively and closely with the students, and her voice could sometimes be overheard explaining a problem to the child, but never in a harsh manner. Students also could come up to her and ask her about their problems. Although in theory this teacher is supposed to work only with comp ed students, that is, the students that she pulled out, or pulls out on other days, in fact on this occasion she worked with more students than the total comp students that she has from this class, and after conversing with the regular teacher of the classrooom, this teacher did say that she had worked with students other than the ones assigned to her. Evidently there was no prior coordination between the comp ed and the regular teacher. This was confirmed in subsequent conversations with both teachers, and thus the regular teacher conveyed through her public comments the nature of the activity that they were doing in class that day. The regular teacher says that she doesn't particularly care what specific techniques the comp ed teacher uses when she teaches a student how to work a problem, and if it works that is fine with her. This may be one reason that there is less coordination between the comp ed and regular teachers than might seem to be desirable. The comp ed teacher did not discipline any of the students in the class, nor did she give any instruction to the class as a whole, or even the subgroup with whom she was working, but simply worked with individual students, circulating from first one child to another. During the class there was no other interruption, and perhaps because the noise level was rather high inside the class, itself, no outside noises were discernible. As noted before, peer tutoring and students working together are considered acceptable and even encouraged as long as the activity does not disturb other children and is related to the task at hand. Thus, there was a lot of movement in the class and, again, quite a bit of noise, although it did not appear to distract any of the students from their work.

APPENDIX B

LESSONS

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LESSONS

Example 1: A Pullout Reading Lab With Instruction Alternating Between Teacher and Machine

This is a Monday only class. However, it met on a Wednesday this week due to teacher illness on Monday. The previous ten minutes are the children's recess time and the teachers' break time. The children filter in three minutes late before the class begins. This is because the students are to report to their homeroom teachers after the recess and then go to this class. This is the pullout reading specialist's class. The lesson begins with the teacher saying, "Okay, we have a story to listen to." She gets a tape and sets it up on the recorder, and the story begins. Two children start saying the story along with the recorder from the booklet, and the teacher says, "I'm sorry, but we're not to read this part aloud now. Just listen, okay?" The story runs through its course, and the teacher waits without really following the lesson. She glances at her watch and so on, and then she starts to listen for the last few seconds of the story. The recorder then instructs the teacher to turn it off and do the exercises in the booklet with the children. She does so. There are 25 seconds of instructional management followed by instruction with emphasis on building words from word parts. The teacher does this with the children, leading them through the exercise. For example, the first word part they work with is -op. They add p and make pop. There are four words formed with -op, and then the students go back to the recording which gives them the correct answers. They turn off the recording and do a new word part with -art, and then they go back with the recorder for the correct answers, and so on, until 11:00. There is a story part to read silently while following along in the booklet which is heavily illustrated. The teacher does filing during this part of the lesson. She then returns in time to turn off the recorder at the end of the story part. The teacher then goes through some comprehension and retention exercises that are in the booklet with the children, calling on individuals to answer, prompting when necessary, making occasional explanations, and giving feedback. At 11:07 the teacher puts the recorder back on, reminding the kids that now is the time for reading aloud with the tape. The teacher also reads aloud with the children and the tape. This is the second story part. At the end of this she turns off the recorder and asks them each a question about the content of that portion of the story. She asks each one in turn, going around the table. The questions are printed in the booklet. She interrupts this to tell one child, "Take off that cap in the classroom, please. There's no need for you to put it on now." The teacher is, in general, very encouraging in the remarks she makes to the children as they answer the questions, and she draws them out with prompts. For example, "That's very good, Jose, but can you tell me a little more about why professor Carl was doing that?" The teacher explains that the last part is silent reading without the tape. The third and last part of the story is now to be read. It is 11:15. The teacher waits for the children to finish reading for 155 seconds of instructional management. She interrupts to do behavioral management. "S, don't read with your face too close to the paper. It's bad for your eyes." She then goes back to a file cabinet and gets together some handout sheets while the children finish reading. By 11:20 the teacher is asking the group as a whole to answer context questions. They call out the answers to the question, and the teacher nods and makes encouraging remarks and prompts. For example, "And what else do you think that meant?" and so on. Then the teacher, at 11:24, gives the children a handout. It is a crossword puzzle, and she lets them work on that until 11:30 when she says, "Okay, you can all go now." That's when the observation ends. There is absolutely no off-task behavior. The children follow both the teacher exercises and the recorded part of the lesson closely and enthusiastically.

Example 2: An Aide Conducts a Lesson at an Inappropriate Skill Level

This is a compensatory pullout group conducted by the Title I aide. The teacher begins this group, directing the students' attention to a vocabulary list written on the board. She asks the students to make three columns on their paper for three different categories, the three categories being, "asking," "has a root," and "has keys." Then she reads the words from the board and instructs the students to put the vocabulary words under the proper category. When the aide is explaining the meaning of "route," she gives as an example, ". . . like a paper route, where you go the same way each time." One of the words is music, and one student asks about it because he can't think of what category it would go into. The aide rather brusquely tells him to just put the words on his paper and make a guess at the categories if he doesn't know them, and they will discuss them next Thursday. A number of the students seem to be getting somewhat frustrated, and it appears to the observer that much of the material is really too far above level. The students do not know the definitions of all the words, and with those words they do know, a connection to the category is rather oblique. For instance, music should go under "has keys," but from the appearance of this group, although they're 5th graders, they seem to be having quite a lot of trouble with the basic materials, and it appeared as if the aide was perhaps insensitive to the level of the material she was giving, and also insensitive to the frustration of the students with the material when she told them to just put it down on the paper and they would correct it six days later. Again a student inquired about the vocabulary word, "beseech," and the only response from the aide was, "Just put it where you think it belongs." To another inquiry from a student on where you would put "ditch," the aide asked, but in a somewhat sarcastic manner, "Does a ditch have keys? Does a ditch ask?" and then went on to say to the students that this is the way they should approach this lesson, by eliminating the categories that don't make sense. Some of the vocabulary words which the students had to assign to a category consisted of the following words: causeway, beseech, entreat, crossword puzzle, solicit, and saxaphone. The observer again feels that the material was at an inappropriately high level, and that the students showed a number of signs of becoming very frustrated by this. One student said, "I'm still on beseech," and the aide responded, "Come on, Arthur, put them down someplace, your mouth is running off." Another student asked, "What does implore mean?" To this student the aide replied, "I'll give you a little hint, you're doing it right now." The aide then turned to a student and said, "Does Mrs. So and So (her regular classroom teacher) allow you to chew gum?" The student nodded and the aide responded, 'Then put it out." One student under his breath, apparently alluding to the aide, came to the word "nag" and said, "Everyone should know that word." Meanwhile the aide is sitting by the students while they're doing the work, and the last five minutes she's grading the student's papers. The students remained on-task during most of the lesson and seemed to be putting forth considerable effort in doing the lesson, but many of the words seemed genuinely beyond them, and they were continually thwarted by the aide's negative or oblique responses to their questions.

Example 3: An Excellent Title I Reading Lesson

This is a Title I second-grade reading group. In the ten minutes previous to this observed group, the teacher and the aide are working with a previous set of Title I students. Those students they are working with stay until this new observed classroom population arrives. The aide then takes four into a subgroup which later becomes five—one student was late—and the teacher takes five into a subgroup. The teacher has previously written words on the board that say, "I hear . . .," and they are to be the beginning of an original sentence written by each child. She has the children get their sentence papers. Sentence papers have a place for the name, date, and lined spaces for writing the sentence. She has her children do that assignment—complete the sentence that begins with "I hear," and the aide also has four children in the subgroup do the exact same exercise. The teacher helps the children by sounding out troublesome words that they ask for the spelling of, and prompting them so that they can figure out the spelling themselves with her hints and her advice. She only actually starts to spell the word when the child is completely baffled. She usually begins this prompting by saying, "What letter does it begin with," and then the child can usually take it through at some point from there. She then goes over the sentences that are completed one at a time, explaining and correcting the mistakes, and from time to time she asks other students in the subgroup to help with the trouble word, or she tells them all what the word is and spells it for them if she thinks it's a good word that they should learn. The children know that when they finish their sentences and the teacher has finished correcting their sentences with them, they are to transfer the corrected sentences to their journals. So as soon as they have been given feedback, they quietly get up and go and do whatever is appropriate. The teacher continues working with the next student. After she's gone through all the sentence corrections, the teacher starts reviewing certain vocabulary words out loud with the students, and without losing a beat of this instruction, she hands out peanuts to the students. So even though she's handing out peanuts, this is purely instruction, and by 9:54 the aide has put her subgroup of five on a feedback teaching machine, sitting with them to monitor their behavior and keep them on-task, and also to answer any questions they have about the teaching machine lesson. Meanwhile, at 9:54 the teacher has the children put their log books away and goes through a step-by-step vocabulary lesson with those children. She has a list of words hanging on a wardrobe pole right next to her and very close to the table where the students are sitting, and she has a ruler. She holds the ruler under the words and pronounces them and has the children pronounce them. She then breaks the word up into syllables by holding the ruler over parts of the word and pronouncing that syllable and then the next and the next, and then pronouncing the whole word. She then asks the children what the word means, and they tell her the answer. This is all preliminary to the basic vocabulary lesson which is given in this manner. After having gone through the whole list the way I just described, the teacher says something like, "What word on this list means the largest one?" The children are then supposed to reply, "Biggest." She then asks the child to point to biggest. This drill continues until 9:34, so there are ten minutes of this drill in which she has the whole group reciting out loud together. At 9:34 the teacher gets a story. It's a short story, and the teacher reads it to the children. Each time one of the listed words is mentioned, the teacher underlines it with the ruler, and the children say it out loud. She then drills them individually on the same words by going right down the line and having each child pronounce them. If the student falters and prompting doesn't help, the teacher calls on one of the other children to say that particular word. She then returns to the first child and has her finish the list. As each student goes through the list correctly, they then work on vocabulary papers which have been self-made. This means they copy words onto precut scraps of paper then they drop them into a carton which is their own personal carton. The teacher continues at that point to work closely with the one child who continues to have quite a bit of trouble, and that one child finally got all the words correct. The teacher then praises him. The student responds, "Oh, I'm always the last one." He appears to be very discouraged. The teacher says, "No, now that's not true. You were the first person to get *this* word right when we were all doing it together," and she points out the particular word which seems to encourage the child a little. Then she pats him on the shoulder, and he is the first one to receive his second helping of peanuts. He then begins to do vocabulary papers. At 10:04 the aide tests the children who are at the machines on what they have just listened to and read via the machines, and the teacher works with all the children on vocabulary papers. She is sounding out the words and going over them with the children a little at a time. She occasionally gets one child's attention and says, "What's this word?" She points to a paper, "What's this word?" She does this randomly. At 10:12 the aide dismisses her five for free reading and gives them peanuts. She sits at the free reading table with them to answer any questions about troublesome words. At 10:12 the teacher works with her five in a different manner. While four are studying the vocabulary on their papers, the teacher has one student go through every word—each word is on a separate square of paper—one at a time. There is a smiling mouse box and a trapped mouse box for each student, and each time the student reads the word correctly, the paper with the word on it is placed in the happy mouse carton. The incorrectly read ones are placed in the other carton. The teacher goes to each of the five children in turn so that there are, for each of the children, some words in the trapped mouse carton. Then the teacher resumes, starting back at the beginning and going through the incorrect ones. This goes on until no child has any incorrect words left. Then she finishes the lesson with a random drill. The random drill goes on until 10:18 when the class is dismissed for recess. I would like to note here that the teacher will often go stand beside a child whose attention is wandering and just rest her hand on his shoulder or his arm to encourage him to pay attention and to have the child feel noticed and bring him back on-task. The only off-task behavior during any of this time was then the teacher blew her nose and when someone had to go to the bathroom. There was no other off-task behavior at all. There were two very, very brief periods of instructional management, and then there were two periods approaching a minute in length each when the teacher was helping some student look for a book.

Example 4: A Distar Reading Lesson

This teacher is the Title I reading teacher responsible for reading instruction to this group of students from two other teachers' regular homeroom 2nd-grade classrooms. The teacher uses the Distar reading program. Five students were in this group. All were at level 2, book 1, in this reading program. Instruction began at 9:19. Students were grouped in front of the blackboard at the side of the room, with the teacher seated immediately in front of them. The teacher teaches by the Distar manual. She began instruction by saying, "We're going to review this morning to see if you can remember your work from yesterday." She continued, "Then, we're going to do our work." She spent about half a minute conversing with the students about last evening's snow. She began a phonics review. Students reviewed vowel sounds and vocabulary words written out phonetically. As the teacher pointed at a given vowel grouping or vocabulary word in her teachers's manual, students responded in group and proffered the correct reading. At 9:21 a student knocked at the door, entered the classroom and went looking for a toy he had left in the classroom, interrupting instruction for about 26 seconds. The teacher then called on students to respond individually, and then once again in a group. She told the group, "Okay, you've gotten to know that sound." She then told students that they were going to begin a little quiz and that they could win a star or win a little prize if they got all of the answers right on the quiz. She further told students, "Yes, it's sort of a test on hard words, but it may not be too hard for you." She then directed a student to hand out this group's Distar reader and directed her students to read over their vocabulary words to themselves. The teacher monitored them. After about a minute she said, "Okay, let's start. Who wants to go first? Say the first column without stopping. You must say all the words right to win." She directed her other students to indicate that they recognized student errors by raising their hands. The first student began reading all of the vocabulary words without mispronouncing any of them. The teacher said, "All right, you get the star. She got them all right." Another student began reading the vocabulary words in a very confident manner and slipped on one of the words. The teacher said, "Look at that word. It's not *her*. All right. Now say those last two words again. You know the words, but you were in a big hurry." Then the student slipped up over another word, and the teacher corrected, "Everybody sound that out together," and the rest of the students in the group sounded out the word that the student had slipped on, in unison. The teacher told the student who had just been reading, "You were slow on that. You have to say them pretty fast." The last and fifth student performed poorly, and the teacher directed a student in sounding out words that the student had difficulty reading. Noting one of the words the student had slipped on, the teacher said, "That's one we're having a lot of trouble with. Sound that out." The teacher pointed at the word printed in the teacher's manual and directed all students to read the word in unison. As this exercise had been completed, the teacher asked, "How many got a star today?" One student read all the words correctly from the teacher's manual, and the teacher asked the student if he wanted a star or prize. She then asked the group, "How long are we going to work on them? That is, how long are we going to study these vocabulary words?" And a student responded, "Till we know them," to which the teacher responded, "Yes. We're going to work on them till we know them." The students then went over their vocabulary words in a group. They repeated the words again and went over the words, row by row, repeating them several times together and individually. One student faltered behind the rest of the group, and the teacher told the student, "All right, hold it. Karen's not talking. Let's see you talking." The teacher had stopped the group activity in order to prompt the one lagging student. As students read, the teacher clapped, keeping time with their reading. When students lapsed in reading, the teacher gave them feedback on correct pronunciation and phonetic rules. The teacher told the group, "All right, we still don't know them. We'll have to study them till we all know them." She then asked, "Who wants to say them all?" She called on one student and said, "Karen, let's see how many words you missed." The student began reading the new vocabulary words, and the teacher said, "Good, go right on." The student completed reading perfectly, and the teacher said, "Now, that was good. We didn't think she was paying attention. She's done a good job. All right, let's try Trina now." This student stumbled along, and the teacher said, "All right, back up." The teacher had the student sound out difficult words and then worked with her entire group saying, "Everybody sound it out." The same student hesitated over another word, and the teacher said, "You know that word." The teacher gave the group instruction on "ar" words. She then said, "Okay, let's try Diana. Keep up with her, Johnny and Scott." This student again slipped over a word, and the teacher said, "What is this word?" She then turned to the group, prompting, "Help her with that word. It has a long sound mark over it. What is it?" The group responded. As students read vocabulary words and performed well, slipping up only on one word, the teacher said, "Watch it, now. That's not an 'e' so what's the word?" The students responded, "Hear." The teacher told the group, "Let me put a few words on the blackboard, then I'll give you your take-home assignment." She wrote vocabulary words on the blackboard. The students then orally read the full words and sounded them out on teacher command. The teacher admonished the group, "Not just Trina. Everybody!" The students then passed in their readers. The teacher gave them their take-home assignments. (Comment: Take-home assignments at 178 do not necessarily mean homework. If a student does not finish a take-home assignment in class he is indeed assigned to take it home, but otherwise it is an in-class assignment.) The teacher then instructed the group to listen to her. She gave directions about completing their assignment. She went over vowel and consonant sounds from the take-home work and had the students read the items at the bottom of the page. The teacher told students that they were going to have a little spelling test. From 9:45 to 9:52, students were at their desks, that is, they got up from the front of the blackboard where they were seated and were sent back to their desks, given sheets of paper and directed to number their papers. The teacher commanded them to spell given sound patterns, saying, "I will first give you the sound, and then I want you to write the sound down." The teacher furnished them with the combination, "Ah." Students wrote it down. The teacher then had students write down full words, such as, "that." She told the group, "Let's all sound it out before we write it," and the students sounded out the appropriate word before they wrote it down on their papers. The teacher then instructed students, "Write that word." This went on for 15 words, and after about two minutes of this, the teacher began monitoring the group silently, occasionally providing students with corrective feedback on their take-home exercise. The teacher went back to sorting materials and asked for student attention. She said to students, "You've got to learn to do these." At 10 o'clock the class was scheduled to end. She told the class, "We'll finish them tomorrow. I'll look at your work then. We don't have time now." Students then left the room and went back to their regular homeroom. The students were on-task throughout most of this period. Only occasionally did the teacher have to correct student behavior, saying, "I want you to listen without talking. Let's listen." These were very rare occasions. No inattentiveness on the part of students was allowed by the teacher. (Comments: The teachers' approach to students was low key, supportive and warm. Students seemed very comfortable within this environment.)

Example 5: A Good Title I Reading Lesson

The teacher has the children put their names on sheets of paper he has handed out. There are two Amish children in this group and one "Yankee." The teacher sits with them at a table in this Title I remedial lab. He says, "We're just going to think for a moment. Can you all say 'wing' for me?" They say, "Wing." The teacher says, "If I say 'swing' what would you add?" (to wing). The children answer in a chorus, without raising their hands, "S." He says, "Very good." He says this frequently, in fact, after practically every answer. He gets up and says, "Look up here." He uses an erasable plastic board and marking pens to demonstrate what he is talking about. He asks them to write the first two letters before the ending -ank. He then gives them such words as "spank" and "tank." He says, "We're going to get them right on the next skills test, Chester." Chester says, "Right." The teacher continues with several other endings. After they are through, he has the children give the answers they have written on the sheets. He has a relaxed manner and the children relate to him very well. He says, "I didn't fool anyone that time." Then he says, "Here's what you get for being so smart—a three letter word." The other comp teacher comes over to his area with information regarding the Title I supervisor who is visiting, and in regard to materials. The teacher says, "Shh. Too much talk." He has the children bring the papers to his desk and put them in a pile. He has everyone get a chair and sit at the table to play Word Lotto. They sit and he stands. He passes out Lotto cards and has one boy turn over the cards for the Lotto game. He says, "We'll play four times. Whoever wins the most gets a free book." The children say, "Okay, okay." He monitors the game, saying such things as, "Don't forget your free space, Chester." He puts the children's names on the board and puts a mark by the name of the child who has won each game. Each game a new child gets to read the cards. One boy says, "This is fun." One boy asks, "Is that 'boats'?" The teacher answers, "No, boots." He also says, "Maryanne, you'd better watch your card, too." This is in response to his monitoring and detecting that they are about to overlook a word that has been called. The last boy gets a bingo and the teacher gives him a book. He also passes two smaller books out to the children with an aside to the observer, saying, "In here everyone wins. This way I get them motivated." The children examine the books and the teacher instructs them to put their names in them. He passes out storybooks to the children to look at as they listen to a phonograph. He says, "Let's look at the Table of Contents. How many stories do you see?" The children answer in a chorus. The teacher stands and walks as the children listen and turn pages in their storybooks. He says things such as, "Turn the page. You have to follow along." He helps one boy use his fingers to follow the record in his book. At the end of the phonograph story the teacher dismisses the children for lunch. The children had obviously heard the story before but were excited to hear it again. As incidents came up in the story, the children indicated their excitement by saying such things as, "Oh, no!" Additionally they said, "Here's where he gets it." The teacher also added comments such as, "This is the part I like best." Children and teacher were completely attentive to the story as it played. (Comment: This is the last school the observer is to visit and this remedial teacher's methods compare extremely well to all other remedial teachers observed. He changes tasks often, uses positive reinforcement constantly—both verbal and non-verbal—and material rewards. He monitors the atmosphere in the classroom and keeps it on a no-lose basis by making sure every child succeeds in some way and that success is acknowledged. And finally, he uses the materials available to him in an interesting manner in that he enters into the activity with the children and seems to be enjoying the manipulation of the materials as much as the student.)

Example 6: A Chaotic PLAN Classroom

Although these two groups were noted as separate groups on the LSF Form, for purposes of observation, they have been observed together. The observational group observed today is following the PLAN program which consists of a computerized program whereby each child follows his own program of learning in math at his own level. Each day the teacher receives a computer printout of where each child is, level-wise, in this PLAN arrangement. The teacher informed me, before the class began, that they would be working on PLAN today, and that she would mainly be informing children where they were in their skills lesson and would be going around the room helping individual students. Within the PLAN directions, students are sometimes instructed to go to different learning centers, a library or an audio-visual tape room to carry out different instructions in their PLAN. Therefore, at various times during a classroom period, children are coming and going according to these directions. The actual starting time of the organized PLAN activity for math was 11:28. The teacher instructed the students to get out their PLAN papers, and she took out her computerized printout sheet for the day and discovered first of all that she had been given the wrong sheet. At this point she went into another classroom to ask the teacher if she knew where her computer plan was for the day and eventually found the correct sheet to use. This diversion took her off-task. When she had the correct sheet, she started calling student's names to come up to a table where they would be introduced to their next activity. The other students who were already continuing with the lesson that they had the day before, were presumed to be working at their seats on these lessons. The teacher spent a great deal of time in instructional management just trying to get all of the computer sheets, computer cards and activity lessons together and distributed to the correct students. During this time the teacher was constantly interrupted by students coming up to ask her about various things, for example, going to the bathroom, having their cookies, and other activities unrelated to their lesson material. Only about 10 to 20 percent of the time was a child asking questions regarding something that he was supposed to be doing in his lesson plan. When children would come up and interrupt her, it usually would turn into being a behavioral management situation as the teacher would say, "What are you doing up here now? Aren't you supposed to be working on Lesson C?" It seemed as though each child actually knew what activity he was supposed to be pursuing, but rather than continuing his lesson he would be asking the teacher about some other subject matter. The room is composed of seven different desks where the students work. During any particular point in this observation period, the teacher would either be at one desk working with several students, working at a desk with one student, or working at her desk with computer cards. The teacher did not once during the instruction period perform any on-task monitoring except with an individual student whom she was working with or with a student who came up to speak to her or interrupt her about something. Throughout the rest of the classroom, general chaos ensued. There were children fighting in the corner or talking to each other. One child was up on top of the desk, and another child tipped over a whole stack of papers on the floor and spent a great deal of time on the floor playing with them. Children came and went at will around the room even though it appeared that the majority of the time it had nothing to do with the directions in their lesson. For example, they were walking over and talking to another student and then returning to their desks, walking out of the classroom area entirely without any papers in their hands which made it appear as if they were not following their structured lesson plans, or walking to another facility for their specific tasks. As I stated before, the teacher did perform behavioral management with students who were at her table, or with students who came up to speak with her. This behavioral management constituted a great deal of the lesson period, and comments seemed to be quite negative and also very repetitive, as students rarely obeyed the first time or two that something was mentioned to them. In some cases the teacher repeated similar commands seven or eight times to a student. For example, "Get the pencil out of your mouth so that you can speak clearly," occurred eight times to a student who was sitting nearby where I was observing. The student never did take the pencil out of his mouth. Throughout this lesson period, there was an aide, Mrs. B, present. She worked with six students during the lesson period in two groups of three. Apparently the aide works with different students everyday, and it depends on who is having problems with the lesson. The aide's presence at a particular table would seem to keep the students on-task for the majority of the time as opposed to what the situation was in the rest of the classroom. When the aide was at the first table, all of the students there were on-task, but as she moved over to the next table, the students that she had formerly been working with went off-task for about 75 percent of the time when she was gone. She remained with the second table until the end of the lesson. I was unable to determine exactly how the aide picks the students that she is going to work with. She simply said that it's whoever needs help, and they are different children everyday. (Comment: It seemed to the observer that more than those children that she was working with would have needed help on that particular day, but it is possible she simply has some kind of rotation system worked out.) All in all, it seemed to this observer that during this group observation very little learning transpired. It seemed as though the teacher had to commit too great an amount of time to dealing with each different student's computer cards, the lesson plan and worksheets. Along with the fact that the majority of time most of the students were completely off-task, they additionally appeared not to have been monitored in any way whatsoever. If it hadn't been for the presence of the aide who worked with six students during the lesson, the only students who would seemingly have had any instruction at all during the period were the 16 students that the teacher worked with individually at different points during the lesson. Of course, all of the 16 students were not on-task the entire period either, as they only seemed to remain on-task while she was actually working with them.

Example 7: A Productive Compensatory Reading Lesson

This is a compensatory class held in a resource center on campus. There were nine students in the classroom during this reading observation. The teacher taught without aides or assistance, and the materials used were all teacher made and consisted primarily of single paragraph stories which were to reinforce the concepts of main ideas in reading. The teacher passed out dittos during the first two minutes of instruction, had the students read an initial short one-paragraph story, and then led a discussion to determine what would be the best title based upon the most interesting idea in the story. The first paragraph consisted of a description of the eating habits of young birds. The teacher led a very interesting discussion and directed the students toward the selection of "Young Birds" as the most appropriate title. She repeated this activity for several other paragraphs including, "How the Brain Helps the Eyes To See," "How Water Is Used Every Day," and "Hunting in the Snow With Indians." The teacher was very skilled in leading this discussion. During the entire time, the teacher was seated with the students in a semi-circle and only occasionally rose and walked a few steps in other directions to write a word on the board. The teacher spent the entire 45 minutes with these students in this one activity. The paragraph materials that she had selected were very interesting, and the students enjoyed the discussion. They enjoyed eliminating the inappropriate titles and discussing the supporting rationale for the titles that they finally selected. The teacher had the ability to make it appear to be a group effort, with all of the members of the group sharing equally in selecting correct titles. She was generous with her praise and did a great deal of verbal reinforcement. I suspect that a number of the teachers at this school have had some training in Skinnerian psychology, and they all had some type of training where they learned to use verbal reinforcement. During this observation there was minimal off-task behavior, and because of the teacher's personality, she was able to keep them on-task during the entire 45 minutes.

Other Circumstances. There were two specific situations or incidents that were of interest. At one point there was a knock on the door, and the teacher was interrupted for a few minutes by one of the mothers who had left her coat in the classroom and asked if the coat was there. When the teacher replied that it was, the mother left and was gone about ten minutes, returned, interrupted the class a second time, picked up her coat and left the class. The teacher gave me this rather bewildered look because she did not understand why the mother first checked to see if the coat was there, left, and returned ten minutes later to pick it up. She smiled at me and shrugged her shoulders. The second interruption, which was the cause of great hilarity among the students, was the discussion of tracking the deer or the winter animals by the Indians in the snow. One boy commented that the title of the story should be "Why Indians Should Buy Snowmobiles." This caused a great deal of humor, as the second graders thought this was hilariously funny, and the teacher also had some difficulty controlling her own laughter at that point, but she redirected the students into selecting a more appropriate title.

Example 8: An EXEL Classroom

This class was late beginning because a parent came to inquire if her son ever had homework because he had said that he did not. While the teacher was explaining that she gave homework three times a week and was actually showing the parent some of the homework sheets the class had taken home, her classroom was very unruly and disorderly. This interview with the parent took about ten minutes. This is an EXEL resource teacher. The lesson was for the entire group. When the class began the children read a story from a ditto sheet aloud. It turns out that the teacher has spent a considerable amount of personal money on these worksheets which had been ordered from the Millikin Company. The teacher called on various students to read a paragraph or so. As each finished his oral reading, she pointed out mispronounced words and discussed the meaning of these and other words in context to the story. The children were very interested in this particular story, and everyone paid full attention. The children were anxious to read, raising their hands and asking the teacher to let them read. This teacher is very articulate and pays particular attention to pronunciation as the children read aloud. The main ideas in the story were then discussed, and the children worked an exercise which was at the end of the ditto sheet which contained the story. There is only one blackboard usable in this classroom because the other one is covered with bulletin boards and student work. This teacher believes that instant feedback is a motivating factor in helping children learn, and that displaying good work also serves as an impetus for continued good work. She also believes in posting an open record of daily grades. In this class this is done by means of a chart with stars indicating perfect or very good exercises. Mrs. M believes that this makes students strive to get more stars and thus become more competitive. Asked by this observer if she thought competitive students made the best students, she said, "I think all successful people are competitive." The class had a visitor while the observation was going on. He was Mr. L who is the District Superintendent and who is over all EXEL programs in the district. He talked with the teacher for about five or six minutes saying he came to observe the art fair which is a two-day festival, containing work from all grades in this school, displayed in the basement. He also said that since he was in the building he decided to observe several classes. He then sat down and observed this class for one-half hour while the teacher continued her work. This was not a scheduled visit. The children were busy with their seatwork, and the teacher continued demonstrating as they did this work. The conduct in the room while Mr. L was there was exemplary. The children were as quiet as mice. After he left, Mrs. M thanked the class for their courtesy, and they were so pleased that they gave her a round of applause. This room serves as one of the four resource rooms for the compensatory program, EXEL. Many materials are displayed here—both manipulative items and aids—and also books, puzzles and games. The room looks a bit in disarry, with things piled up everywhere in stacks or just scattered around on windowsills, unused tables, etc., but there is something about this room which seems comfortable. This observer noticed SRA reading lab materials and the specific skill series prominently displayed. Mrs. M says that there are about six interruptions per day from the intercom system. She also said that the policy needs to be instigated as to when parents can come to confer with teachers. As it is now, when parents come and go to the principal's office to inquire about a child, they are sent immediately to the teacher's classroom so that there is no way not to break into the lesson since the teacher must, in all courtesy, stop and talk with them.

Example 9: A SEED Lesson

Class began at 9:45. This is a SEED instructor, who is not a math teacher but a math specialist. He entered promptly at 9:45, as scheduled, went around to each of the tables very quickly talking softly to each of the students, and then began his instruction. The lesson was adding fractions, and rather than have the children work them separately at their seats, he wrote problems on the board and asked students to find the answers. Once they thought they had an answer, they would raise their hands, and he would call on them. Then he would ask the class if it agreed, disagreed, or didn't know about the answer. If it agreed or disagreed, he would ask why or why not. No one was ever corrected, and if a student was wrong, he would allow the student or another student to show the error. There were several other unique instructional techniques used by the instructor. One was that no verbal agreement or disagreement was given. If they agreed they would raise their hands. If they disagreed they would move their arms horizontally as opposed to vertically. He calls them "silent hands." Then he had students go to the board and do different types of problems. He would have two go together so they would be competing against each other. They would also appoint a third person to be the timer. The timer would start them at a certain time by saying, "One, two, three, go!" The teacher also spent a good deal of time monitoring students tasks. He was extremely fast, almost running from one table to another. Another instructional technique used by the teacher was that he would break down complex tasks into simple ones, so the first thing he would have them do would be to take a series of fractions they were going to add and break that down into what you multiply by to get a common denominator, and then he'd have them find the common denominator. Then he would have them add up the fractions which would be another step. Then they would reduce the fraction which would be another step. He had broken the problem down into simple tasks. Another technique was to go around and have each student whisper the correct answer in his ear so that not all of them would know what the right answer was. Another technique was the use of group response. He would say, "Would all of Table One tell me the answer?" He also did things like, "all those wearing blue, tell me the answer." This was an attention getter and created interest when it started to wane. Another technique he used to get attention was to have the students repeat what he told them, using their own words. This seemed to help keep people on-task. The session ended when he was going to let one of the students erase the board if they could tell him the answer to a particular problem. One of the students got it, and he allowed him to erase the board while he left. The instruction period ended at 10:29.

Example 10: A Well-Organized Compensatory Reading Lesson

Mrs. T is a comp ed teacher of this second grade reading group. Mrs. T's children come in from another class a few minutes after school begins when their regular classroom teacher has taken roll, has them salute the flag and has taken care of morning business. On this particular occasion the children did not show up for the first few minutes, so Mrs. T went to fetch the children and brought them into the classroom at 9:06. The three children came in one-by-one along with Mrs. T. As they entered the room they greeted one another in the morning ritual, saying, "Good morning," to one another. The three children appeared to be very active and easily distracted. One was very anxious to show the teacher something. However, Mrs. T wished to get the class into action and told the child, "You can show me what you want to show me after we do the calendar." The children still appeared quite excited. However, they sat down at their table. Mrs. T then summoned one child to the calendar to announce the day and the date and month of the year. Mrs. T asked the children a variety of cognitive questions regarding the calendar, such as, which letter and which sound the month of March begins with, which letter and sound this particular day begins with, etc. Then Mrs. T told the children that they could now show their surprise. She was asked to close her eyes as all three went up to the board and wrote, for the first time, in cursive handwriting, the letter "a." They then told her to turn around, and she demonstrated great surprise and pleasure at the fact that they had begun to learn cursive handwriting. She then asked the children to go back to their seats saying, "But now let's get back to our work." Mrs. T distributed a handout to the children. She held up a similar handout to them and began to ask a series of questions about the picture on the page, initiated with, "What do you see in the picture?" She very actively solicited responses from all of the children and appeared to be making certain that each child in turn was active during the lesson, answering one of the many questions she asked. In fact, the major portion of the lesson was delivered through a series of questions—questions about the materials and questions about content-related matters. The questions appeared to serve a variety of functions. They operated as cognitive checks, but also as an excellent device to keep the children on-task. Each child seemed to be quite prepared for this style of interaction with their teacher and always seemd to know that he would, at some point, have to answer a question about the materials. Finally, when Mrs. T ended her questions about the pictures, she began to ask them what they saw in the picture, and as they reported to her, she got up and wrote the sentences the children uttered on the blackboard. She then summarized for the children what they had just done by saying, "Okay, so far everything you've told me and everything we've written and read here are things that we saw in the picture." As indicated by the above description, Mrs. T presented a great many benchmarks for the children, always telling them what they are doing, what they will be doing, and when done, what they have just done, and very actively involving them in the lesson through questions. There were very few instances of behavioral management. In part I attribute this to the tight classroom and activity organization that Mrs. T demonstrates, and in part to Mrs. T's relationship to her children, which appears to be a very direct and individual relationship with all the children, although she is very businesslike and does not demonstrate a great deal of emotion and affection. She appears to be a very relaxed individual and conveys that relaxed mood to the children. The children appeared to be very comfortable around her, touched her and easily approached her and asked questions. They did not appear greatly upset or ashamed if they did make a mistake. There was one relatively minor instance of behavior management during which time one of the children began to talk and behave in a distractive fashion during the recitation of another child. Mrs. T turned quickly to the child and said, "Cory, we listened to you when you had your sentence. Now we're listening to Sean." Cory quickly quieted down and returned to his work. Another child seemed to be very active, attempting to engage other children in his interaction, grabbing the work of other children, talking and moving stuff around, and occasionally Mrs. T turned to the child to tell him to pay closer attention to the work. The lesson progressed smoothly through the instructional period in a manner similar to the one described above. A few minutes before the end of the lesson Mrs. T presents an overall review and testing of the initial consonants studied through the lesson. Just at the end of the lesson she turns to the children and says, "Okay, I think you worked very hard today. You're going to get two smiling faces. Line up, now." The children lined up at their charts while Mrs. T handed them their rewards for the day, at which point they went to place the smiling faces on the chart, and then they lined up to return to the classroom at 9:28.

Example 11: A Highly Motivated Reading Class Using Compensatory Materials

This is a fifth-grade reading group receiving instruction in a regular classroom and is considered compensatory because they are using comp materials. There were 17 members of the class. During this observation the teacher taught alone, and the instructional period lasted an hour and ten minutes. The first ten minutes of the class were spent in awarding books. The awards were not awards in the sense that the books were given to a student for any particular activity or success, but were awarded on the basis of chance. The teacher wrote a number on a piece of paper, folded it up, and gave it to one of the students to hold. Then the students guessed various numbers between one and fifty, and the five students who had the numbers closest to the one that the teacher had written on the paper were awarded the first chance of reading these brand-new books which had been purchased by the library. The student with the number closest to that of the teacher had his first choice of the books. The teacher made a game of it, and the students were quite serious about it and enjoyed the whole activity. The winners were also responsible for giving a book report to the class the following Friday. The books were student-interest type books including several on hunting and fishing, several travel books and several science-fiction-type stories. At 11:05 the teacher, who during this whole time worked at the front of the room, introduced a discussion of Pandora by asking, "What are legends? What are myths?" They discussed some local legends and local myths, and then he introduced a list of new words that were to be found in the story. He had previously listed new words on the blackboard. The words were: Pandora, Prometheus, disguise, youth, ordinary, and horrid. He instructed the students to copy the words in their workbooks which they did very quietly. He discussed the definitions for a second time very rapidly as they copied the words into their books. This teacher has established very wide aisles between the rows, and it apparently discourages conversation among the students. He mentioned that this story of Pandora was one of his favorite legends, and he mentioned that he had once seen it done as a play, and that it might be possible for their class to do it as a play. He introduced the words: act, scene, and script, and instructed the students as they read the story to think how they could go about turning the story into a play with acts and scenes. He asked them to watch for various parts of the story that they could develop as acts and scenes in their play. At 11:25 the students began to read, and the teacher returned to his desk to the front of the room to work on papers. This continued for 20 minutes at which time the teacher initiated a discussion of the Pandora myth. By that time the students had determined that a myth is a story that was probably not true, and that it may have been passed down by word of mouth and may have had its origins before man kept written records. He directed this conversation with the various students quite well, and they were very interested in distinguishing between history and legends or myths. They discussed the problem of staging this as a play after they had discussed the possibilities of various scenes and various acts and the people in the class who might be able to play the various parts that they had identified. The one time when everyone was off-task was when they identified Dotty as the one person who might play Pandora, and the teacher asked what would happen when Pandora came into the room and saw the box. One of the boys said, "If Dotty plays it she'll probably fall over it." Everyone laughed at that, and there were a few minutes off-task. Even the teacher laughed with the group but immediately went back to the discussion. They discussed particularly how they could identify the problems that Pandora released when she opened the box, and had several clever ideas as to how they could show the various troubles being released into the world by having either students play the parts of various troubles or using a spring-action release which would be identified by labeling cutout butterflies. They had several other suggestions as to how to solve the production problem if they were to do the play. The class apparently has done other stories as plays, and the students were anxious to get this one under way. They said they had a lot of work to do and had to first write the titles for the three acts. The teacher continued the discussion of what occurred in the story and what might be good dividing parts which would constitute the structure of the three acts. This continued for the final 15 minutes of the class, and the students were very anxious to begin the production and get work started on it. They all participated in the discussion, and he was able to direct the discussion so that every student was able to make some suggestion and participate in some way in the initial stages of the planning of their production. He seemed to have full control of the classroom at all times, and even when the students were reading silently, there was little or no disruption in the class. The only noise was occasionally when one of the students would get to the part where the box was opened, and you would hear the students say, "Wow! Gee," or something like that, but certainly not disruptive behavior. The teacher made many positive comments during the discussion and would say, "Good idea," and encourage their participation. The classroom was very harmonious, and he seemed to monitor the group without any problem whatsoever. The activities were well organized and flowed easily from his early interest building through the silent reading and into the discussion of the possibilities of doing the story as a play.

APPENDIX C

CLASSROOM MANAGEMENT

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Example 1: A "Barc" Class

This is what is called a "Barc" class—Behavior Analysis Resource Center class—and is a behavior analysis type model. The children are given rewards in the form of tokens for performing their work, and they bank them at the end of the day. This means they can turn their tokens in for resources—free reading periods, and other things that they like to do. The teacher started the class by handing out books, and as she did that she gave instructions. She said, "Close your reading books, boys and girls." She works with the entire group, asking, "What does the word plural mean?" She asks the children to raise their hands, and she will call on them to answer her questions. She asks questions regarding the making of plurals and calls on each child, one at a time. She has the entire group read a rule together when a rule occurs in the lesson. She uses positive reinforcement, especially, "Very good." She writes several words on the blackboard and then asks the class how to make each one plural. She calls on the children with their hands raised. If the answers are correct, she says, "Very good." If they are incorrect she simply goes to another child. When one boy does not raise his hand and the girl next to him does, the teacher rewards the girl and says, "Bobbie raised her hand and answered and gets a token." The boy next to Bobbie withdraws from the lesson for awhile by gazing around the room and making faces. The teacher says, "You all did very well on this." She then distributes tokens to all but the one boy. He makes another face as she passes him by. One girl is talking and the teacher says, "Bobbie, do you remember what happened Friday when it came time to spend?" Bobbie says, "Yes," and the teacher replies, "Then what do we do?" The child answers, "Work." The teacher then says, "Okay." The teacher now goes from child to child helping them individually. She stoops in front of their desks, which have been put in a horseshoe-shaped configuration in order to have them face-to-face, answering questions and asking them questions such as, "How many syllables are in rabbit?" The teacher distributes tokens after this period of individual help to students who are progressing and were attentive as she helped them. The teacher allows talking between the children regarding their work. She ignores students who are talking and does not reprimand students who are daydreaming. Her catch phrases of reinforcement are, "I like the way Bobby is working," and "That's very good." She takes one child's tokens and dumps them back in the pot because the girl has been playing with them and has offered one to another girl. There is no admonition to the girl while she is doing this, and the student makes no comments to the teacher as the tokens are dumped. It seems she accepts this passively. One girl has raised her hand, and the teacher goes by to look at her paper. The teacher says, "I don't like the way you did this. Do it again." At 11:46 she asks them to start counting the pages they have finished. She then records each child's pages, and as she records them, she marks the papers correct.

Example 2: A Small Compensatory Reading Group Using a Contract System With Rewards

This is a fifth-grade compensatory class taught by the compensatory teacher in the resource center and consists of three students receiving compensatory reading instruction. The resource center that this teacher uses is very small, probably not much larger than 10 feet by about 18 feet. There are several small tables in the room, and since the group itself is so small, it is almost a one-to-one teaching situation. The observation period was 30 minutes. The materials used included a recorded story called, *Eric Helps His Friends* (in which the children listened to the story record while reading the story from their text), a third- and fourth-grade level book called *Power to Read* by Media Materials, and *Reading for Meaning* by K. Furlong, published by the F. Shaffer Corporation. It is difficult, because of the small number of participants in this group and the small size of the classroom, to distinguish which was one-to-one instruction and which was full-group instruction. The teacher moved easily between the two tables, and after making the project assignment, seemed to be always working with one of the students. She moved back and forth between the two tables every few minutes and constantly monitored their progress through their assignments. The teacher uses a contract system with her compensatory groups. The students negotiate contracts with her, and the contracts all include similar options so that the student, even though he is choosing his activity, is nevertheless choosing from activities which the teacher has determined as skill weakness areas. The student chooses ten out of 15 options. For example, option one would be to do worksheets or job cards, both leading to the correct spelling of words taken from a text. Another option would include making words from the title of a story or making words from the task cards. A third option would be to do two pages from their comprehension book or work on their word packet. Among the tasks that were available which she considered motivational were, for example, reading into a tape recorder, writing a report and reading it into the tape recorder, or reading a lesson on the controlled reader and completing it with the speed that would make it interesting listening when it was taped. The students must earn 30 points during the week, and there are various gifts from the teacher's treasure chest which are worth various points, and depending upon the student's activities during the week, he is able to select gifts from the treasure chest. Rulers and comic books are worth ten points; erasers, ball and jack games are worth 20 points; folders, markers, compasses and paddle balls are worth 30 points. The student at any of those levels—10, 20, 30—can select a gift. There are also rings, e.g., finger rings with Indian head designs or glass stones, which go for four points. The student may at any time select a gift or may accumulate points to earn specific gifts. The teacher purchases these materials from a cut-rate drugstore or from an art supply house, and although she is funded from Title I money, purchases these gifts or tokens with her own money. Each student during this observation worked on the completion of the tasks in his contract. The contract remained with the student during the entire lesson, and he was able to check off one of various activities, have it verified by the teacher, and then enter the number of points it was worth on the teacher's score sheet. The teacher was doing almost one-to-one instruction during the entire time, with the exception of five minutes when she was negotiating a contract with one of the students. Towards the end of the session the teacher announced the number of points that each student had earned during that time. The kids cheered for their two fellow students, and the teacher made a real point of how diligently and how hard they had worked during that day to earn that many points. Additionally, the teacher has three ink stamps: the green ink stamp goes on a paper that needs improvement; the second, a blue ink stamp, says, "Keep trying"; and the third, which is a red ink stamp, says "Excellent." She makes sure every paper has one of three stamps on it, and there is no negative implication even in the "keep trying" blue stamp. She also frequently uses stars or birds or other little glue-ons on the paper, and later, in discussion, she said that these small tokens meant a great deal to the children—they were quite proud of them—and they indicate they are showing some progress in their reading. She said that even she was surprised at the way some of these students were able to work when they were outside the regular classroom.

Example 3: A Well-Organized Title I Math Class

This was an observation of a Title I math class consisting of 14 second-grade students taught by Mrs. B, the Title I reading teacher, with assistance from her Title I aide. The subject of today's lesson, which began at 1:19, was working with a number line. Before the children entered the classroom, Mrs. B already had the number line drawn on the blackboard. When the students entered the room and sat down, Mrs. B began a short lesson on how to work with the number line and gave various examples in order to demonstrate this to the class. She then started by calling individual students up to the board and gave them various problems to work, for example, 26 minus 10. She had the children with their chalk show how they were counting on the number line to arrive at their answers. After several children had worked problems on the blackboard, she asked the class if they knew how to do the problem. Most of the students said they did. To one student who had not been paying close attention to Mrs. B's demonstrations, she said, "Now Ray, you better listen so you know how." After this Mrs. B gave a short synopsis on how to work with the number line, and the aide began passing out worksheets and pencils. At 1:28 the teacher, Mrs. B, started going around the room and working with various individuals as they were working on the ditto sheets with problems concerning number lines. Both the aide and Mrs. B are very patient with children and say such things as, "That would be 15, Honey," as they are working with the children. Between the aide and Mrs. B they work with almost every individual, with the exception of two students who seem not to have any problems and finish only after several minutes of working on the ditto sheet. Mrs. B then begins to pass out papers to the children that they have previously worked on during other class periods, some of which are completed, and some of which still need to be worked on. She starts doing this as she sees that some of the children are finishing so that they will have a project to work on for the rest of the class period. She says to a couple of students who are up out of their chairs as they are finished, "You all sit down and I'll give you your papers to work on." She then tells the class that they will wait several more minutes for the rest of the students to finish, and then they will work the problems that they have done on their dittos on the blackboard. Mrs. B then begins calling individuals one by one to the blackboard to work some of the problems that appeared on the ditto. The children are very anxious to give the correct answers, and when one student is at the board and is taking a while to work the problem, Mrs. B says to the rest of the class, "Let's see if he does it right; if not we'll have to help a little." Mrs. B works approximately half of the problems from the ditto on the board with various individuals. When Mrs. B started her instruction with the students at the blackboard again, the aide went to the back of the room and started correcting papers the children had been working on. At 1:41 Mrs. B instructs the girls to get in line and the boys to get in line behind them, and she begins handing out papers that have already been corrected from the previous day's class. Mrs. B makes comments to some children that they have done very well on them. During this class the students got a great deal of individual attention from both the teacher and aide. The students seemed interested in the lesson, and there was very little problem with off-task behavior, as most of the students worked steadily through the period or paid attention to Mrs. B when she or the other students were working problems at the board. One child, in fact, seemed quite excited when he had understood how to work with the number line, and he said, "I've got it now." The teacher was very supportive with the students and used very little behavioral management. Most of the eleven seconds of behavioral management consisted of saying things such as, "Let's all listen now," or "Sit down, please." Also, when students finished their assignments early, Mrs. B did hand back other papers for the children to work on rather than simply letting them sit waiting for the other students to finish.

Example 4: A Chaotic Compensatory Math Class

This teacher is the instructor of this fifth-grade compensatory math class. She provides instruction to a group of fifth- and sixth-grade students from another homeroom class. From 2:25 to 2:28 students entered the room singly and together. The teacher left the room for 40 seconds. An aide was present, seated at the back of the room. The teacher returned to the room and instructed the aide to work with a certain student during the period, and the aide worked with from one to three students through the period. The classroom was extremely disorderly, and the teacher spent the greater part of three minutes attempting to bring the class to attention and to rearrange seating, but without effect. (Comment: This is the most disorderly, unruly and disorganized class the observer has ever seen.) No student was on-task until 2:34, and then for the most part, only five or six out of 15 were ever on-task at any one time, or for that matter were doing any work at all or even attempting to respond to the teacher's instructions, directions, or behavior commands. The teacher, who is frustrated almost to the point of hysteria, yelled at students and was almost completely ignored. This observer has had to code as instructional management situations what may well have been behavioral management or off-task activity on the teacher's part. For example, the teacher, after 15 minutes of trying to bring at least seven of her students on-task, or at least attempting to bring them to a point where they weren't disruptive, simply gazed at them fatalistically, resignedly, almost catatonically—just possibly she was monitoring their work—but the work was not clearly in evidence. Students ran about the classroom, obstinately interacted with the observer, obviously influenced a few students who might have benefited from instruction, had chalk fights, socialized, yelled and screamed. After 2:43, she most often ignored the commotion around her and devoted her activities to only six or seven students. Instruction actually began at 2:27 with the teacher passing out paper and giving directions. As two students arrived the teacher responded sarcastically, "Look who arrived." (Comment: These students had been forced by the principal to attend compensatory math on the threat of suspension, and pointedly refused to participate.) At 2:29 the teacher went to the blackboard to demonstrate how to do fractions. She gave an example on the board, passed out torn sheets of paper representing fractions of a whole and asked the students to work out the problems themselves. She did not pass out paper to a number of students in the class. (Comment: She appears to have given up on instructing a number of students within the class—perhaps seven students out of a class of 13 and, accordingly, did not direct any instruction to them.) At one point the teacher remarked to one student, "I don't want you in this class." At 2:35 the teacher worked at the blackboard with two students, instructing them in fractions, while all but three students working with the aide did nothing. That is, at this point, five students were on-task while the remaining eight students were completely off-task. From 2:37 to 2:38 she worked with one student at the blackboard, and again, all but the two students working with the aide and the student at the blackboard did nothing. Again, she questioned the two students, "What made you two guys show up today?" Answer: "The principal." Teacher: "You guys do nothing." From 2:40 to 2:43 the teacher interacted with the observer. For the remainder of the period, from 2:43 to 3:02, the teacher worked with approximately six to seven out of 13 students, three of whom had been working quietly and separately with the aide. Much time was spent monitoring, whether for instructional or behavioral management could not be ascertained. At 2:58 the principal's bell rang—not the school bell signaling the end of the period—and two students left the classroom in an unscheduled manner. (Comment: It was obvious to the observer that the two students knew that it was the principal's bell and simply used it as an excuse to leave the classroom.) One of the rowdier students walked over to the table where the aide was tutoring three students, and the aide asked him in mock amazement, "Are you interested? Are you!" (Comment: the aide was obviously unbelieving.) From 3:00 to 3:02 the teacher gathered materials while children milled about aimlessly through the classroom. The bell rang at 3:02 signaling the end of the period. Throughout the instructional period, perhaps three of the students remained on-task during the instruction. During the course of the observation the teacher approached this observer and spent a few minutes explaining her behavior and class conditions. (Comment: The teacher was chagrined that the observer was observing such an unruly and disorderly class and attempted to justify the situation while she professed that she didn't care what was being observed. The teacher was so obviously unnerved by student misbehavior that the observer could not caution her against interacting with him but instead coded her off-task.) She identified one child as having a brain disorder and "not belonging here." He had been main-streamed but could not respond to math instruction at this level or in this setting. One girl was identified as being responsible for the amputation of a teacher's thumb at this school. She had slammed a door on it. Three students were repeating the class for the third time. Two attended only under pressure from the principal. (Comment: The observer had the feeling the teacher felt the principal was using the classroom as a "holding tank.") At one point, the teacher commented to the observer, "I need a psychiatrist." She further remarked, "As far as I'm concerned I'm only working with three students." The aide, in an aside, said, "There's only one word to describe it—unbelievable." (Comment: This is an unusually disorderly classroom. All of these students come from another teacher's fifth- and sixth-grade combination homeroom. However, while observing that homeroom, this observer noted almost no off-task behavior. It's possible that some of these students were at that time out of the room. However, while realizing full well that many of these children do have behavioral disorders, this teacher has no behavioral techniques, for example, positive reinforcement, to bring them to task again. Rather, she reacts despondently and almost fatalistically, makes negative comments constantly, though rarely losing her temper completely, but in any event she seems to have given up on even attempting to reach these students.)

Example 5: A Compensatory Class With Teacher Trainees Monitored by a Specialist and an Aide

This teacher is the compensatory specialist. She provides reading instruction to first-, second- and some few third-grade pupils during this period scheduled from 8:40 to 9:20. Second-grade pupils are pulled out of their second-grade homeroom during this period. The teacher's classroom is cheerfully decorated with teacher-made, commercial-made and student-made materials, such as handicrafts, examples of student work, and instructional posters with math, reading or language arts skills. Her room is divided into five centers separated by bookcases and shelves which are topped and packed with materials, and also separated by partitions. Students are assigned to one of the five centers to spend the instructional period, or part of that period, receiving instruction and working at tasks at that center. During this observation the centers were used for one of the following purposes: 1. Programmed reading with Sullivan Programmed Reading Books 9-13; 2. Comprehension using SRA (Science Research Activities) materials with such topics as, *The Kangaroo Pocket*, and *The Town Crier*; 3. Consonant instruction at the listening center containing a record player with headsets where students were working on Houghton-Mifflin *Listen and Do* dittos; 4. Phonics: Lyons and Carnaham Book A; 5. Language experience such as writing a story and supplying a drawing about Valentine's Day in order to improve vocabulary, comprehension and spelling skills, and then reading it back to the subgroup. The teacher is responsible for providing instruction for some 40 to 45 teacher trainees through the year under the aegis of the local university. Each student teacher is responsible for the activities of one learning center, providing instruction and monitoring students for understanding. The teacher's primary role throughout this period was to monitor and observe

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teacher/trainee student instructional interactions, though all activities and allocation of resources had been planned by her. In addition, the teacher has a paid half-time aide who also monitors teacher trainee/student interactions. Both the teacher and the aide walked from group to group, and on a few occasions, assisted with materials, reinforced student progress and provided tutoring to students as needed. The teacher attempted to reinforce students for tasks accomplished or in progress and encouraged students successfully to attempt more difficult tasks as a simpler one was mastered. Time spent with an individual student varied from several seconds to two minutes and averaged one-and-a-half minutes. She interacted with perhaps seven individual students within an instructional context and with all groups. As the students entered the classroom in file at 8:47, all were assigned immediately to the learning centers. Each center had from three to six students who remained at their center under teacher trainee supervision throughout the period. Students knew their assignments, materials were already in place before they entered the classroom, and they were immediately and with only a few questions, on-task. No students were at any time off-task through the period. There was little noise, no behavioral disorders and no inattentiveness. When the teacher interacted with subgroups or an individual student within a subgroup, she always praised and was at all times effusively positive. There was no negative reinforcement and much affection—touching, kissing and laughter. Perhaps the only behavioral management activity was placed within a positive context. Remarking on a disturbance (Comment: It had, perhaps, occurred on the previous day as the observer noted no disturbance), the teacher asked a child to, "Help another student in the subgroup [and] not to be angry." Reinforcing the child's positive behavior, she commented, "That's why I put you here to help her." Reinforcing a child's learning, she commented, "Did you notice I put you in a tougher book? That's because you're so good. I'm really pleased with you." When another student presented his finished assignment she said, "Let's see. I'm waiting for this one," in expectation and excitement to see the student's work. Questioning a student at the comprehension listening center she asked, "*What was the story about? Why are you drawing this scooter?*" Prompting the student response she praised her saying, "You know what that tells me? You were listening." At 9:18 the teacher directed the group to gather materials and clean the tables. Students responded immediately, gathered materials and wiped the tables, after which the teacher praised them. Students formed a line and the teacher asked, "How do we walk in the hallways?" All students answered, "Quietly," and at 9:22 they left the classroom, waving goodbye to the teacher trainees.

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